ESPECIALLY DESIGNED FOR SAVING TIME AND MONEY • • •

AUTOMOBILE SERVICE TOOLS

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN.

MILLER TOOL & MFG. CO., INC.
DETROIT, MICHIGAN

Automobile Service Tools

Many Are Especially Designed for

PLYMOUTH - DODGE - DESOTO - CHRYSLER

PASSENGER CARS **COMMERCIAL CARS AND TRUCKS**

Tools Marked * May Be Used on Other Makes

MILLER TOOL and MANUFACTURING CO., INC.

DETROIT, MICHIGAN

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MILLER TOOL & MFG. CO.
Detroit, Michigan

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BOOK IS DIVIDED INTO 12 MAJOR SECTIONS

For your convenience this book is divided in practically the same manner as your factory shop manuals: Such as Axle Front, Axle Rear, etc. The tools pertaining to each major assembly are in this way gathered together so that you may quickly select all the tools for any specific operation.

These assemblies are listed with their respective page numbers:

	Pages
Axle Front	3 to 8
Axle Rear	9 to 18
Brakes	19 to 24
Clutch	25 to 28
Cooling System	29 to 32
Electrical System	33 to 36
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Steering	58 to 59
Transmission	60 to 61
Body	62 to 64
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Tool Toter and Steel Cabinets	67
Numerical Index and Price List	68 to 71
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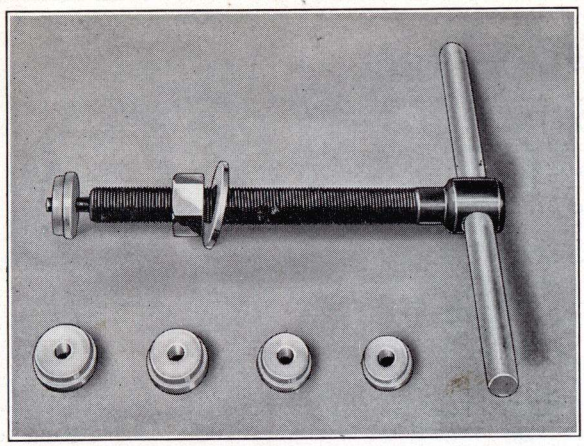
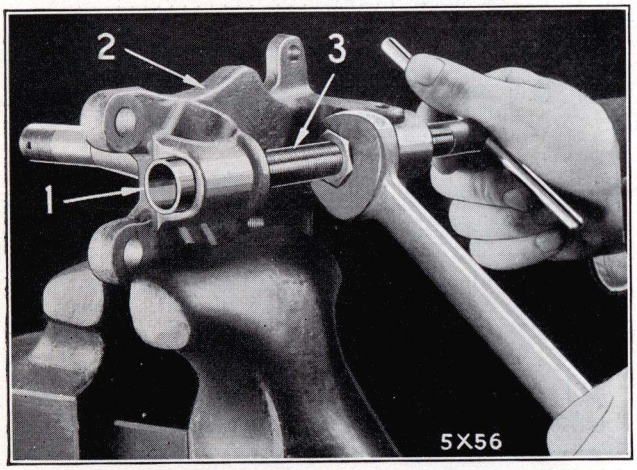
FILE THIS CATALOG CAREFULLY, WHERE IT CAN BE READILY REFERRED TO BY EVERYONE IN YOUR SERVICE DEPARTMENT.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN

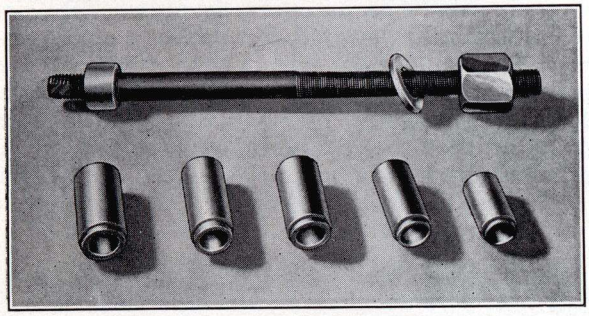


KING PIN BUSHING REMOVING AND INSTALLING TOOLS

C-342 For 1933 to 1937 Plymouth and Dodge Models with upper and lower bushings **$2.25**

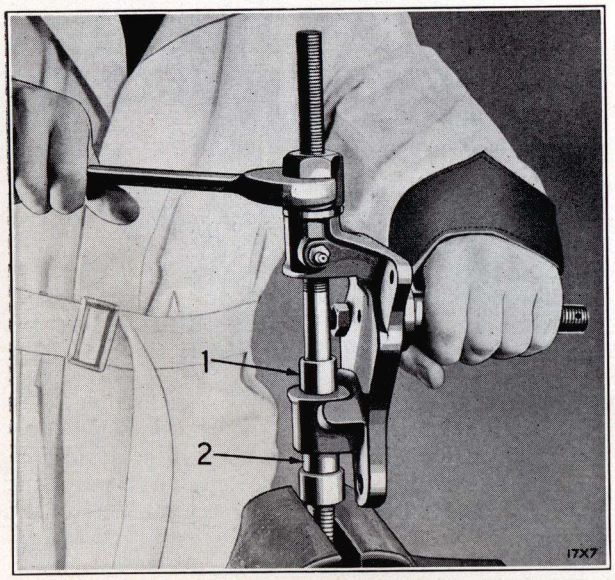


The use of these tools to install the king pin bushings is very important, especially when installing the rolled type of bushing. Illustrated at the left is the C-342, the small button fits the bushing which is then pushed in place by turning the installing screw. These tools insure an even pressure on the walls of the bushing during the whole operation, safeguarding against the chance of crushing the bushing as when a hammer and block are used. Be sure the bushings are tight in the spindle or axle before line reaming or burnishing.



C-328 For all Models except 1933, 34, 35 and 1936 Dodge and Plymouth. Especially adaptable to 1938 models using upper roller bearing in steering knuckle **$3.25**

Adapter No. 10 is used for Roller Bearing and may be ordered separately.



Replacing spindle bushings and roller bearings on these models is easily accomplished with this tool. New parts may be installed without any danger of being damaged and lubrication openings easily aligned.

Adapters are supplied to fit several different sizes of bushings including the roller bearing used in the upper part of the steering knuckle of some models.

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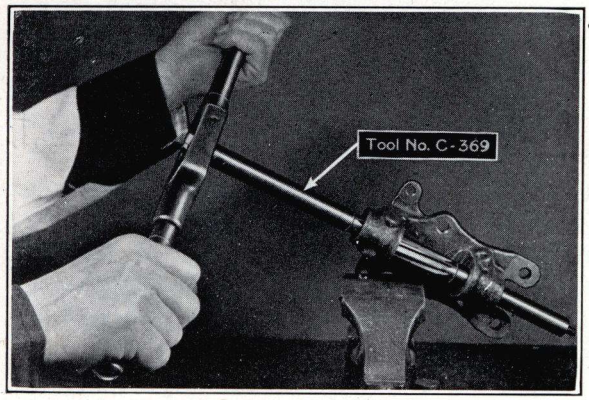
KING PIN BUSHING LINE REAMERS

(Spiral flute expansion type)



* **C-343** King Pin Bushing Line Reamer, Size .734". For 1933 Plymouth and Dodge Sixes. Also Dodge Commercial Cars **$8.00**

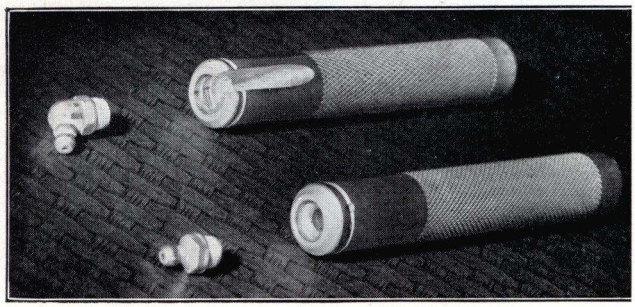
* **C-369** King Pin Bushing Line Reamer. Size .795". For 1934 to 1938 Plymouth and Dodge Models, also 1937 and 1938 DeSoto and Chrysler 6 Cylinder Models **$9.25**

* **C-29** King Pin Bushing Line Reamer. Size .875". For Dodge DK and DO Eights, and Chrysler early 70, 72, 75, 70, 77, CD, CG, CD*, CP, CH, CL, CT, CQ, CA and 1933 CL Chrysler Eights, 1½ and 2 ton model Trucks **$10.00**

* **C-379** King Pin Bushing Line Reamer. Size .9375. For 1934 to 1938 Chrysler Imperial Models and Airflow Eights **$11.95**

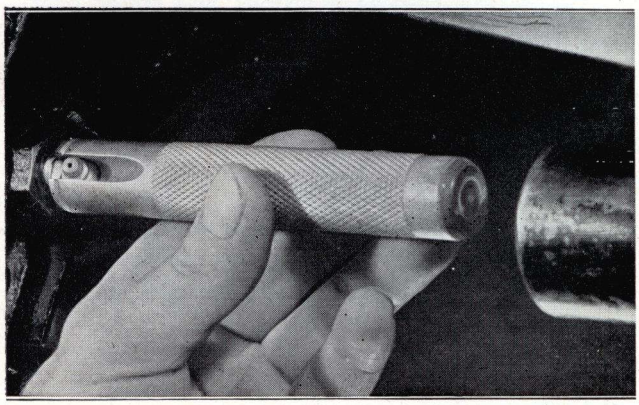
* **C-58** King Pin Bushing Line Reamer. Size 1.000". For 1935 to 1938 Custom Imperial Models **$11.60**

Other standard sizes also available.



It is absolutely essential that the king pin bushings be line reamed or burnished after being installed. If they are finished one at a time, the king pin may fit each bushing separately but when it is installed in both there may be binding due to lack of alignment which necessitates further reaming and a sloppy fit. The pilots of these tools are made so that while one bushing is being finished the tool is still aligned through the other insuring a complete bearing in each bushing for the king pin. Always install the king pin bushings as illustrated on page 5.

DRIVE TYPE LUBRICANT FITTING INSTALLING TOOLS



* **C-437** For all 1937 and 1938 models, per pair **$0.72**

Some replacement parts are machined to accommodate drive type lubricant fittings — they must be installed with either of these simple tools. One is used for straight fittings and the other for angle types.

The lubricant fitting is inserted in the proper drift and driven into the plain drilled hole provided in the part. It cuts its own thread and may thereafter be removed or reinstalled with a wrench.

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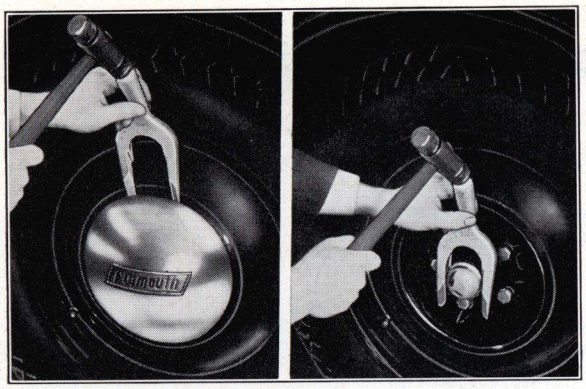
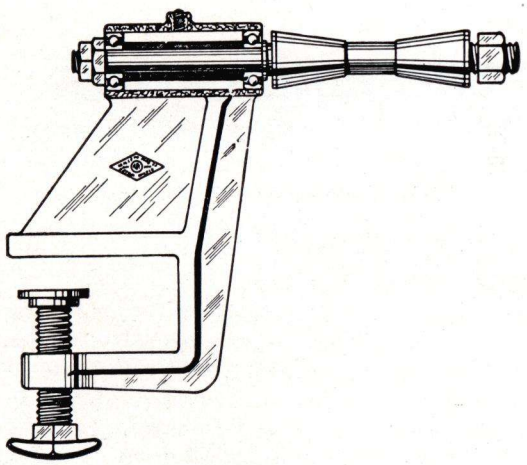


HUB CAP AND GREASE CAP REMOVING TOOL

* C-438 For All Models **$1.40**

The illustration indicates how easily this tool removes both the outer hub caps and the inner grease caps on front wheels. Tool is double stepped to fit various sizes.

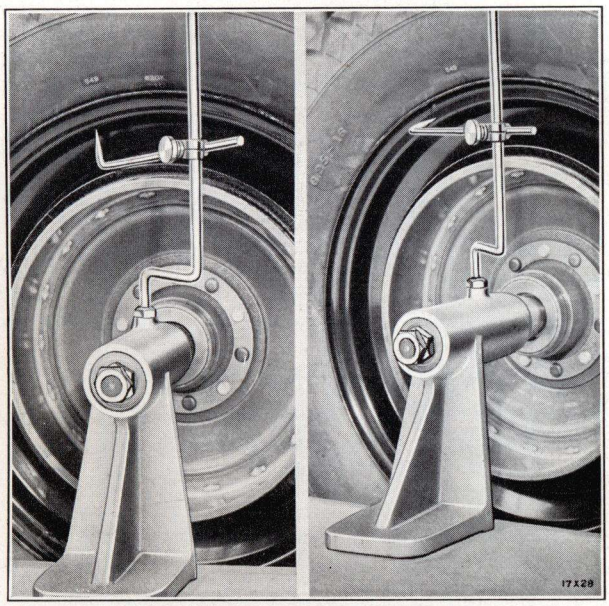


WHEEL BALANCING FIXTURE

* DD-436 Bench type for All Models . . **$19.75**

Wheel balancing was not important when cars traveled but thirty miles an hour but today with high speeds wheel balancing is exceptionally important. One ounce on the tread of the average wheel sets up a twelve pound vibration force when the car travels sixty miles an hour.

75% of wheel shimmy is caused by poorly balanced wheels — excessive tire wear, destructive vibrations, wheel tramp are also caused by this unbalanced condition. Equip with this economical wheel balancing fixture — save money for your customers — make money for yourself.



The tapered cones allow this fixture to fit practically all passenger cars and light trucks. The large arbor is mounted in heavy duty, dust protected ball bearings making this tool exceptionally sensitive. It is quickly and easily clamped to the most convenient work bench as illustrated. Balancing weights supplied by your parts department.

At the left a wheel is being checked for both twist and run-out. The indicating arm may also be adjusted to check against the tire. Each fixture is shipped complete with these indicating arms.

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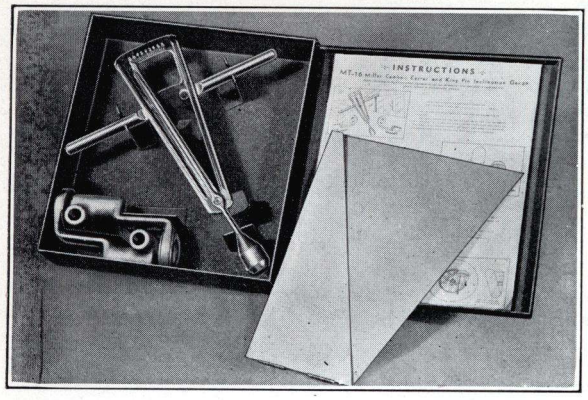
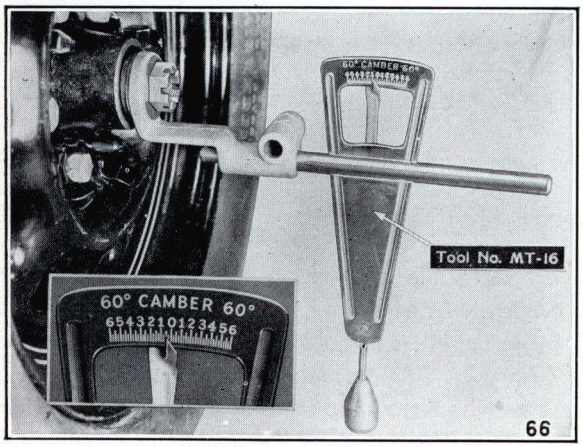


CAMBER, CASTER AND KING PIN INCLINATION GAUGE

* **MT-16** Complete for all passenger cars and light trucks **$9.00**

Accuracy, simplicity and low cost are all combined in this remarkable gauge. Accuracy of this gauge itself can easily be periodically checked by the mechanic by clamping one of the adapters in a vise and taking a reading on the same scale with first one arm and then the other. Readings will be the same if gauge is accurate.

Before attempting to check front wheel alignment on any car, be sure car is on level floor or rack and tires evenly inflated to recommended pressure.



Read 60° Scale for CAMBER

CHECKING CAMBER

1. Wheels must be in straight ahead position.
2. Remove hub cap and spindle nut. Install universal spindle adapters as illustrated.
3. Install gauge in spindle adapter parallel to spindle and tighten spindle nut against adapter so that pendulum on gauge swings free.
4. Read Camber on 60° camber scale. Reading toward wheel is camber — away from wheel is reverse camber. Repeat operation on opposite front wheel.

CHECKING CASTER

1. Install gauge as shown in Camber illustration and take readings from 40° scale.
2. Turn wheels forward 20° (use 20° angle plate). Wheels should be turned slightly past 20° then brought back to relieve friction between floor and tire.
3. Read forward angle and turn wheels back 20°. (Turn wheels slightly past and turn back to 20°).

HOW TO DETERMINE CASTER OR REVERSE CASTER CONDITION

4. If the front and rear readings are on the same side of zero, subtract the front from the rear. This result will be the Caster angle.
5. If the readings are on the same side of zero and the rear reading is less than the front reading, the result will be reverse Caster.
6. If one reading is on one side of zero and the indicator crosses zero on the other reading, add the amounts which will result in either Caster or reverse Caster.
7. If, when turning the wheels from the forward to the rear position, the movement of the indicator is toward the wheel, the condition is Caster, and if the movement of the indicator is away from the wheel, the condition is reverse Caster.

EXAMPLES

INDICATOR ON SAME SIDE OF ZERO:

Rear reading . . . . .4°	Rear reading . . . . .2°
Front reading . . . .2°	Front reading . . . .4°
CASTER ANGLE . .2°	REVERSE CASTER 2°

INDICATOR ON BOTH SIDES OF ZERO:

Front reading . . . .1° away from wheel and zero
Rear reading . . . . .1° toward wheel

CASTER ANGLE . .2°

Front reading . . . .1° toward wheel
Rear reading . . . . .1° away from wheel and zero

REVERSE CASTER 2°

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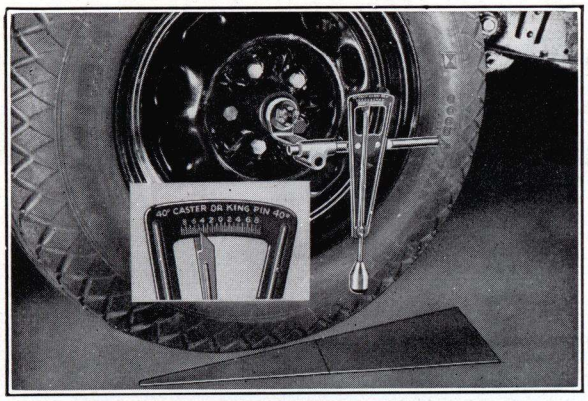


Read 40° Scale for KING PIN INCLINATION

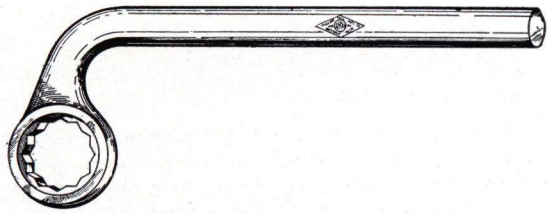
EXAMPLE Front Reading 4½°
Rear Reading 4½°

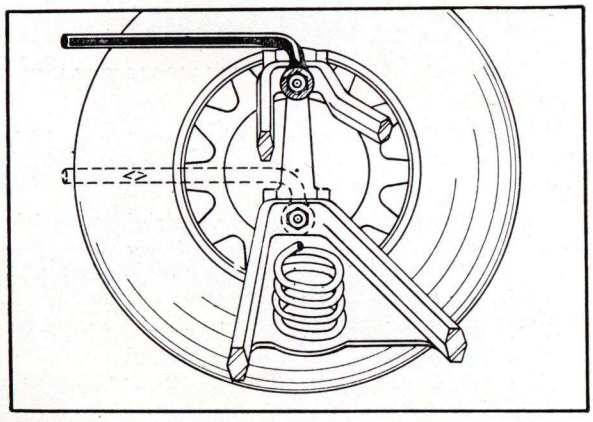
King Pin Inclination 9°

CHECKING KING PIN INCLINATION

1. Install Gauge in spindle adapter PARALLEL to wheel as illustrated. Adjust spindle adapter until gauge reads zero.
2. Turn wheels 20° to the left of straight ahead position and take reading on 40° scale. Remember to turn wheels past 20° and bring back to line up with angle gauge.
3. Turn wheels 20° to the left of straight ahead position and take reading on 40° scale.
4. ADD these two readings together and result is King Pin Inclination. Repeat operation on opposite front wheel.

NOTE: Changing Camber or Caster directly affects front wheel "Toe-in." Check "Toe-in" with the DD-398 Front Wheel Alignment Board (Toe-in gauge). Full Floating Turntables are also available for checking "Turning Radius."



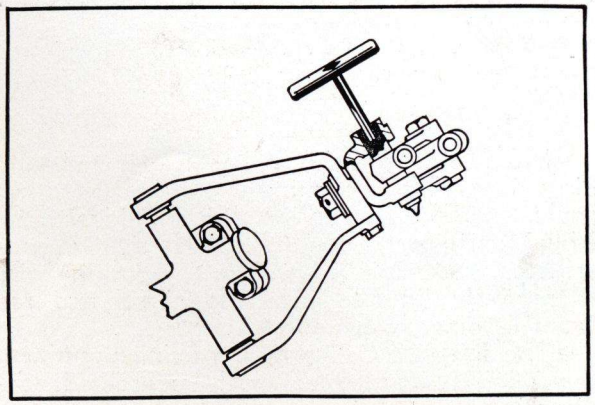


CAMBER ADJUSTING WRENCHES

C-361 For 1934 Plymouth, Dodge and Chrysler Sixes. Also Upper Nut on 1935 DeSoto and Chrysler Airstream Models **$1.95**

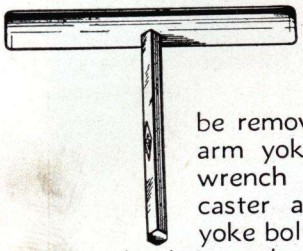
C-400 For Lower Nut on 1935 DeSoto and Chrysler Airstream Models **$1.95**

Even if you have the proper gauges for setting camber and caster you must have the right wrenches to make the actual adjustments. These heavy duty wrenches are especially designed to fit these cars and are made of the best material heat treated to stand up under severe service.



CASTER ADJUSTING WRENCH

C-363 For 1934 Plymouth, Dodge and Chrysler Sixes. Also 1935 DeSoto and Chrysler Airstream Models **$0.75**



To make the caster adjustment on these cars the removable high pressure grease nipple must be removed from the upper control arm yoke bolt so that the C-363 wrench may be installed in the caster adjusting screw inside the yoke bolt.

The shank is made of special heat treated steel capable of withstanding every strain it is called upon to bear.

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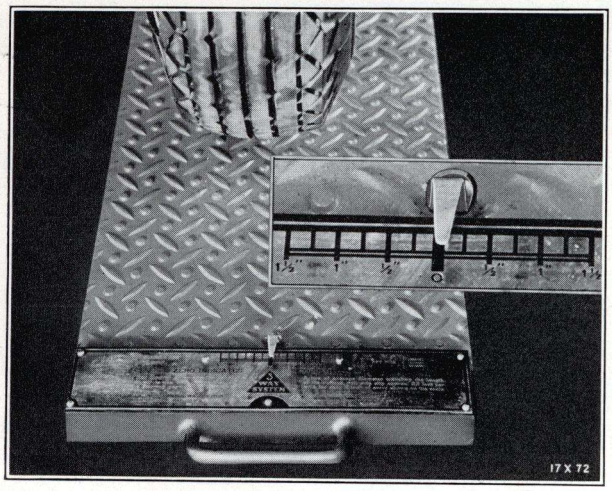
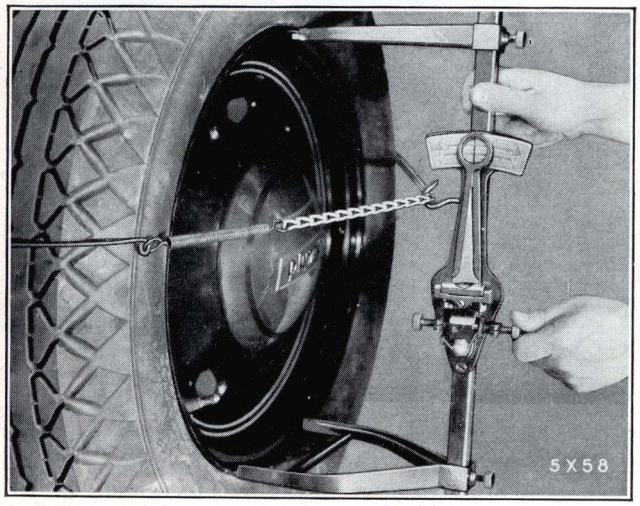


FRONT WHEEL ALIGNMENT BOARDS ("Wee Gee" Board)

* **DD-398** For All Passenger Cars **$37.50**

* **DD-399** For Passenger Cars, Trucks and Busses **65.00**

This is the most accurate tool for measuring front wheel toe in. It represents a section of the road mounted on roller bearings free to pivot sideways as the vehicle is rolled over it — if there is any wheel scuff the board moves, giving a visual reading. Used on straightaway and on turns. Ideal for independently sprung front wheel models with either single or double tie rods. Always check outer wheel when looking for steering error. If "Wee Gee" Board travels "in" opposite wheel has toe out. If board travels "out" opposite wheel has toe in. ¼" graduations represent approximately 33 feet slippage per mile. Packed with complete instructions.



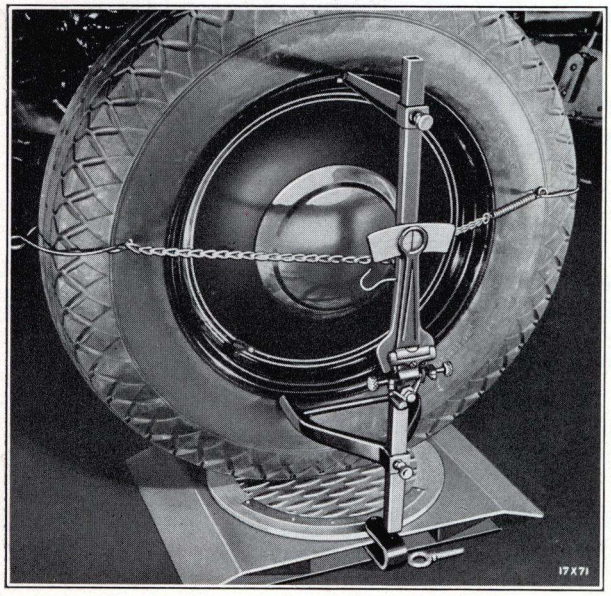
UNIVERSAL CAMBER CASTER AND KING PIN INCLINATION GAUGE

* **DD-428** For All Models **$39.50**

Accurately measures camber, caster and king pin angles through the wheel from wheel felloe or from edge of wheel rim.

Is used with car in normal driving position — wheels on the car and the full weight of the car resting on them. Adjustable for all wheels from small doughnut type (13") to truck size (22"). Self calibrating double reading indicator is included to simplify readings.

Use this gauge with DD-425 Turntables. DEDUCT ¾° from caster readings to compensate for the height of the turntables.



FULL FLOATING DRIVE-ON TYPE TURNTABLES

* **DD-435** For All Models, per pair **$54.00**

Must be used with Camber, Caster and King Pin Gauges when checking Caster and King Pin angles on models equipped with individual front wheel spring suspension. Very rigidly constructed and equipped with quick locking pin. Attractively finished in white nickel and red enamel. Used in pairs.

The DD-428 Gauge shown being used with the DD-435 Turntables must be ordered separately.

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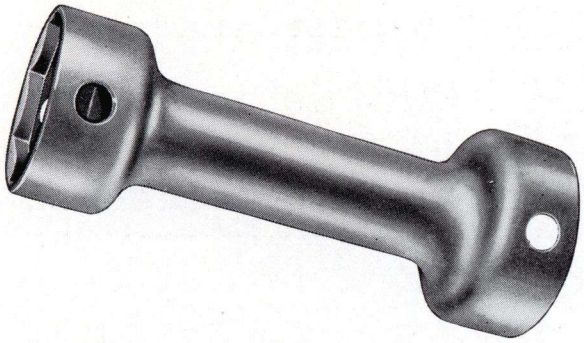

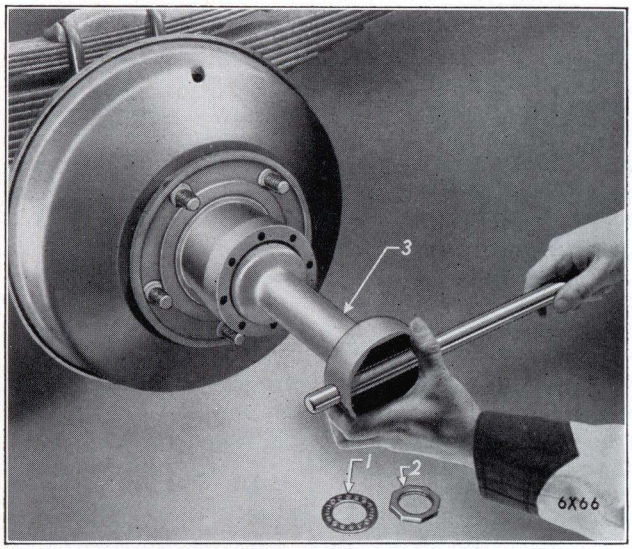

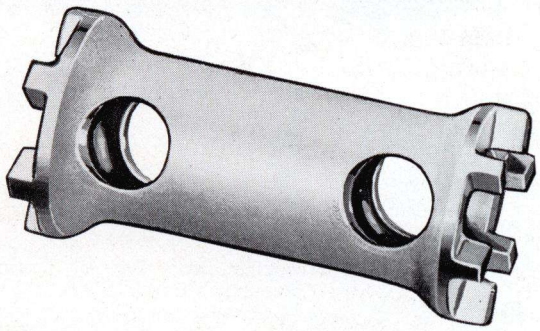

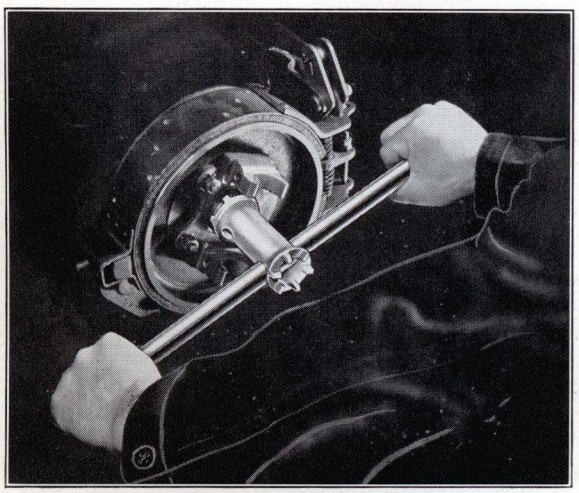

REAR WHEEL BEARING ADJUSTING NUT WRENCHES

DD-429 Sizes 2½" hex. and 2½" flat. For 1933, 1934 and 1935 1½ Ton Trucks . . . **$3.50**

DD-432 Sizes 3⅜" hex. and 3⅜" flat. For 1934 and 1935 2 Ton Trucks **$4.25**

DD-437 Sizes 3¼" and 3 13/16" Octagon. For 1936, 1937 and 1938 3 Ton Trucks **$4.85**

DD-438 Sizes 3⅛" and 3⅝" Octagon. For 1936, 1937 and 1938 1½ and 2 Ton Trucks **$4.75**

A very unusual alloy casting, having qualities similar to a forging, is used in these special wrenches. They each accommodate two different sizes of nuts hence each is really two wrenches in one at a single wrench cost. The outside diameter of each wrench is carefully held to size so that it easily enters the wheel housing.

REAR AXLE PINION SHAFT and TRANSMISSION MAIN DRIVE SHAFT NUT WRENCH

DD-406 For all 1½ and 2 Ton Trucks with round slotted nuts **$2.50**

The transmission and pinion shaft nuts which this wrench fits are round and slotted instead of the conventional hexagon or square type, so that it is very important to have this wrench. These nuts must be locked up very tightly — this wrench is made from a specially heat-treated chrome nickel steel to withstand the heavy strain and service. The long handle gives ample leverage to loosen even the tightest nut.

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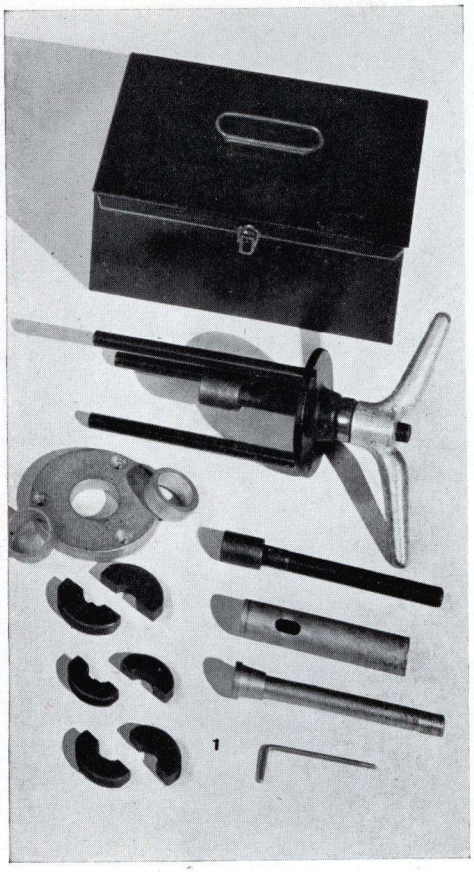


C-158 Puller Complete

REAR AXLE SHAFT and INNER BEARING CUP PULLER

* **C-158** For All Passenger Cars and Commercial Cars. Complete in metal case **$17.50**

C-158-23 Puller Screw available as extra for 1937 and 1938 Dodge ¾ and 1 ton Trucks with semi-floating rear axles.

It is exceptionally important that your service department be equipped with the proper equipment for safely and economically removing the rear axle shaft and inner rear axle bearing cup. Without this equipment much valuable time may be lost and expensive parts damaged or broken.

Equip now with this latest design of rear axle puller, one tool C-158 services all semi-floating rear axle models. Packed in a metal cabinet providing a safe and convenient tool box for all parts. Enthusiastically recommended by hundreds of satisfied users.

PULLING REAR AXLE SHAFT

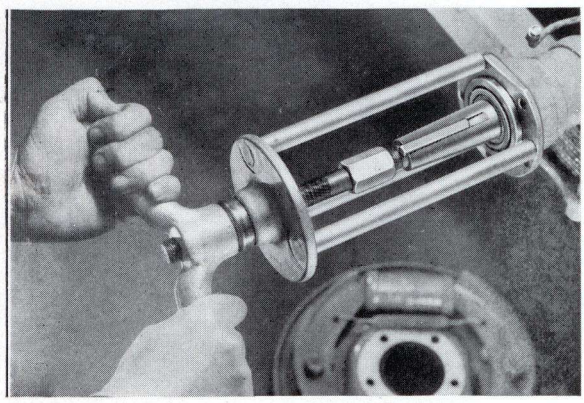
This illustration clearly shows how easily an axle shaft may be removed, if the proper equipment is used. No chance to damage parts or consume more than the time allotted to this service operation.

Compare this simple and efficient method with one where the mechanics tug at the shaft, or fervently try to drive it out of the housing with a sledge hammer.

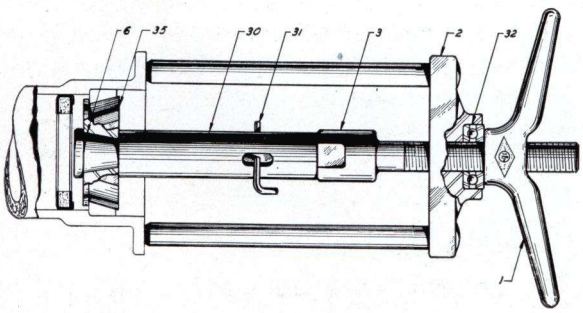
Be sure to keep threads well oiled. This will make your equipment last longer and operate much easier.

For those shops who wish to purchase only the axle shaft pulling part of the tool less the metal case, as illustrated at the left, the following set is available.

C-499 Rear Axle Shaft Puller only. For All Passenger Cars and Commercial Cars. Packed with both ¾" and ⅞" puller screws, less metal case **$5.50**



C-499 Pulling Rear Axle Shaft



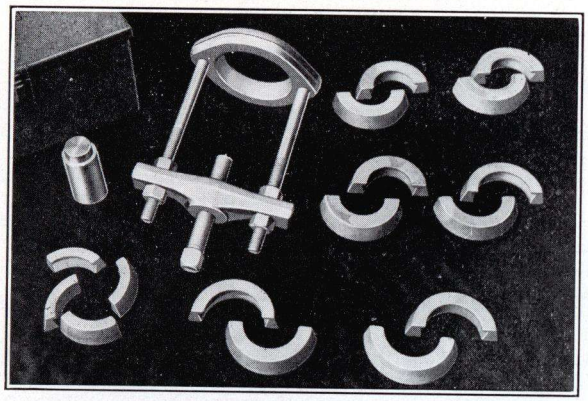
C-158 Pulling Inner Bearing Cup

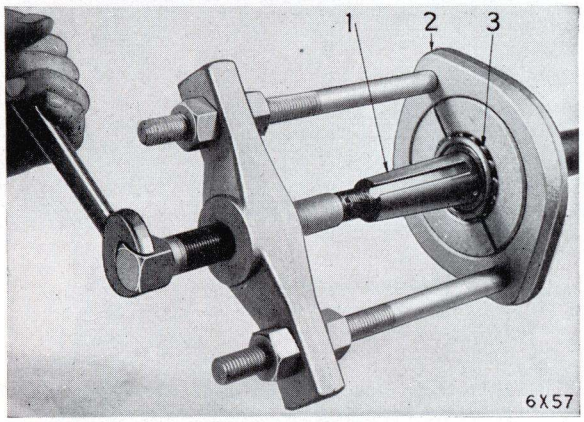
PULLING REAR AXLE INNER BEARING CUP

Whenever it becomes necessary to replace the inner rear axle oil seal, change the rear axle end play adjusting shims or replace the rear axle bearing cup the C-158 Puller must be used as illustrated at the left.

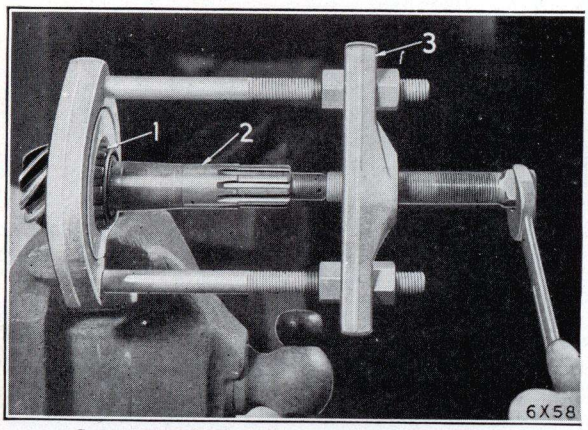
The number six puller screw and proper set of puller blocks are installed in the bearing cup, the special sleeve is assembled over the tapered expander screw to hold the puller blocks square in the bearing cup while it is being removed. It is very important that this sleeve be used, puller blocks will not be damaged if tool is used as illustrated. The ball bearing thrust bearing used under the large wing nut allows this tool to be operated with a minimum of effort.

MILLER TOOL & MFG. CO. AUTO TOOLS DETROIT MICHIGAN

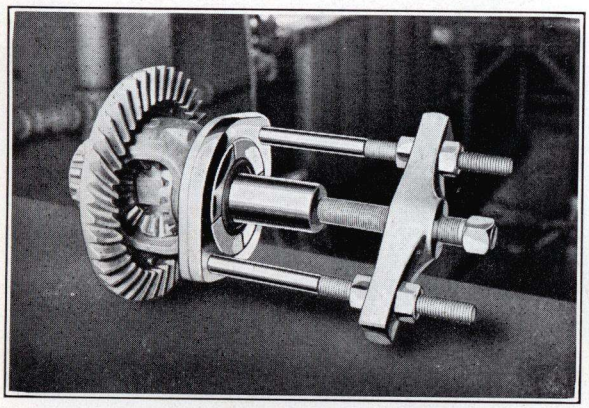




C-293 Removing Bearing from Double Bearing Rear Axle Shaft



C-293 Removing Rear Pinion Bearing



C-293 Removing Differential Side Carrier Bearings

REAR AXLE, PINION SHAFT AND DIFFERENTIAL SIDE CARRIER BEARING PULLER

* **C-293** For All Passenger Cars and Commercial Cars. Packed with seven sets of puller plates. Plates 10, 12, 13, 16, 17, 18 and 21 shipped unless otherwise specified **$23.00**

This puller utilizes the very latest method of removing tapered roller bearings from the rear axle and pinion shafts. Special adapter plates are supplied for each different size bearing so that it fits the rollers very closely. Old antiquated methods of removing these bearings invariably destroyed one of them — salvage good bearing races from broken shafts — save the cost of this tool on the first few jobs.

The bearing puller plates are carefully manufactured and numbered in pairs to be sure they fit accurately each size of bearing. It is important therefore that they be used in pairs. Most of the rear axle bearing plates are split in two pieces. The rear pinion and differential side carrier bearing plates are made up of four parts. When removing the side carrier bearings the differential adapter plug is used as shown in the lower left hand illustration.

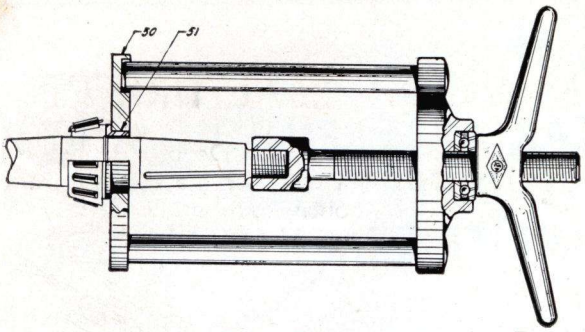
BEARING PLATE CHART SUPPLIED

On Page 75

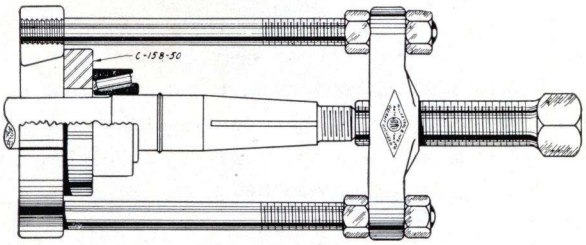
A complete chart showing correct number of puller plates for each bearing is attached to inside cover of box. Follow chart carefully. Two digit number indicates plate number — Three digit number indicates pair number.

SERVICE PARTS

Individual parts for this and all other Miller Tools are available. See tool parts list in back of book for most parts.



Removing Inner Rear Axle Bearing Race



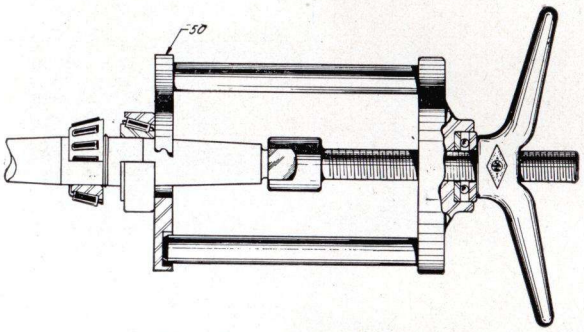
Installing Inner Rear Axle Bearing Race
(Note bearing cup is assembled over race)

USING THE C-158 and C-293 IN COMBINATION

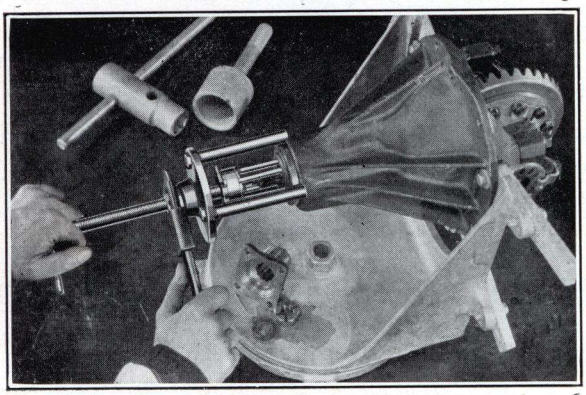
The C-158 may be used in varying combinations for performing what would otherwise be awkward, and often times very difficult, but extremely important service operations.

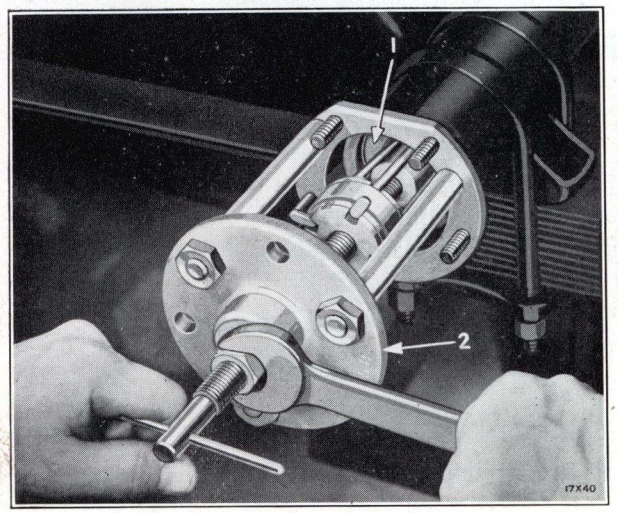
In the illustration at the left the C-158 is being used with the special round disc and bushing to remove the inner rear axle bearing race from an axle shaft after the outer one has been removed with the C-293 Bearing Race Puller. It is quickly and easily installed as shown in the lower left hand illustration.

The illustration directly below shows how the outer rear axle bearing race may be very quickly and accurately installed. These combinations make the job of installing the bearing races possible in a small shop where an arbor press is not available. Other combinations are easily worked out by mechanics as the need arises.



Installing Outer Rear Axle Bearing Race
(Note bearing cup is assembled over race)





REAR AXLE SHAFT INNER OIL SEAL and PINION OIL SEAL PULLER

C-358 For all Plymouth, DeSoto, Dodge and Chrysler Passenger Cars, also Dodge and Plymouth Commercial Cars **$4.50**

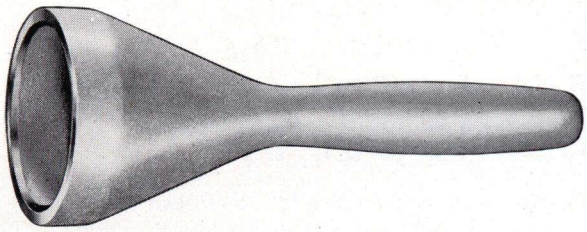
DD-804 For Pinion Oil Seal only on 1937 and 1938 1½ and 2 Ton Trucks . . . **$5.75**

Adjustment of the drive pinion bearings for correct end play of the pinion shaft is made by shims. These can only be reached after removing the pinion shaft oil seal with the Special Puller, unless the differential carrier assembly is completely dissembled. The puller arms are turned in toward the center and slipped along side of the pinion shaft, in behind the oil seal. The arms are then turned out and dropped in the locating slot which holds them in the proper pulling position. The puller housing is then assembled in place and the oil seal removed as illustrated. Always install with special drifts.

Removing Rear Axle Inner Oil Seal

The small but strong puller arms are firmly expanded behind the rear axle inner oil seal by forcing them out with the tapered cone as shown at the left.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN

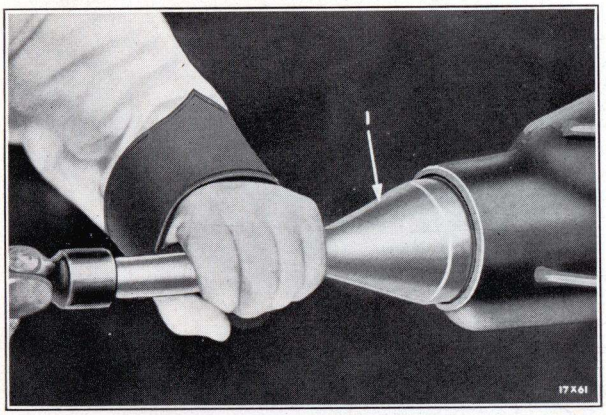


PINION OIL SEAL DRIFT

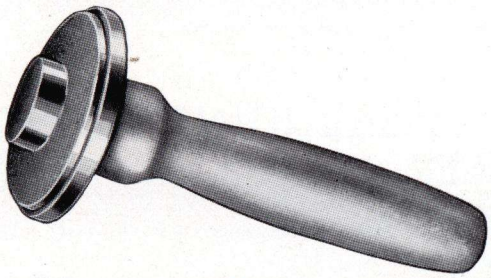
C-359 For all Plymouth DeSoto, Dodge and Chrysler Passenger Cars, also Dodge and Plymouth Commercial Cars . **$1.75**

DD-807 For 1937 and 1938 1½ Ton Trucks **$1.75**

DD-808 For 1937 and 1938 2 Ton Trucks **$1.75**



It is exceptionally important that the later type pinion oil seal used in these models be installed correctly. The only proper way to efficiently do this is to use this drift. It is easy to use and protects the new oil seal while it is securely driven in place to give the trouble free service for which it was designed.

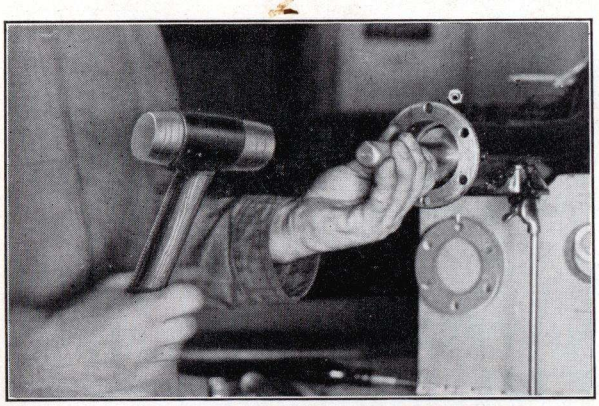


REAR AXLE SHAFT INNER OIL SEAL DRIFTS

C-201 For 1936, 1937 and 1938 Plymouth, DeSoto, Dodge and Chrysler Models, also Dodge and Plymouth Commercial Cars, also 1929 Dodge Six and Chrysler 65 and 75 . . . . . **$1.75**

C-202 For all 1930 to 1935 Plymouth, DeSoto, Dodge and Chrysler Sixes and Light Eights **$1.75**

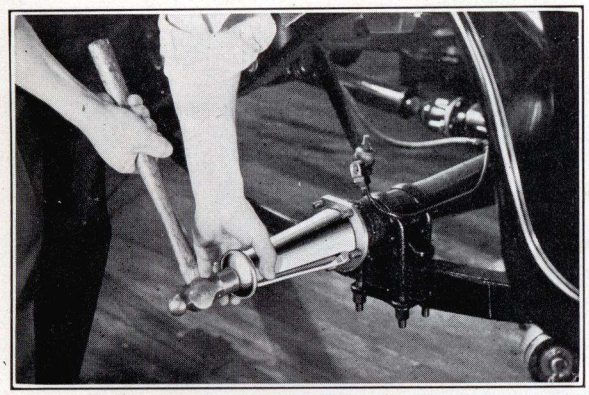
C-241 For Chrysler C-15, C-20 and 1937 and 1938 ¾ and 1 Ton Trucks with Semi-Floating Rear Axles **$1.75**



It is very essential that the rear axle shaft oil retainers and the inner bearing cups be properly installed. This operation is correctly and economically accomplished with the Miller drifts listed above.

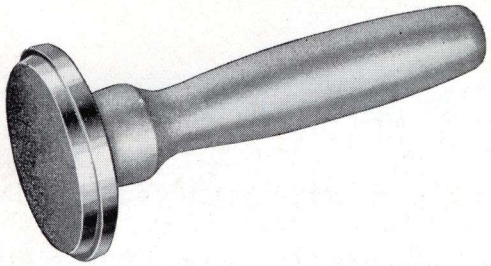
REAR AXLE SHAFT OUTER BEARING CUP DRIFT

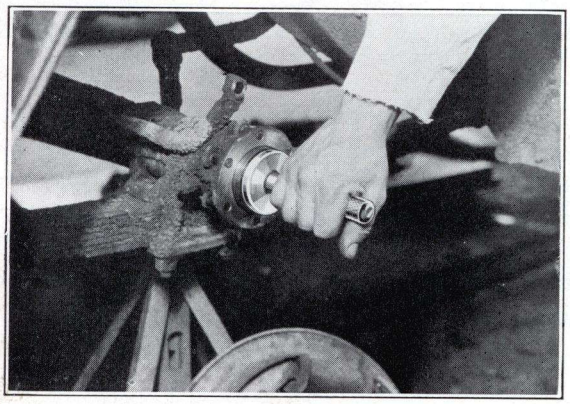
C-413 For all Semi-Floating Rear Axle Models **$1.75**



Every service department should have one of these time saving tools. It provides a safe method of installing the outer rear axle shaft bearings on both single and double roller bearing rear axles. One drift fits all models.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



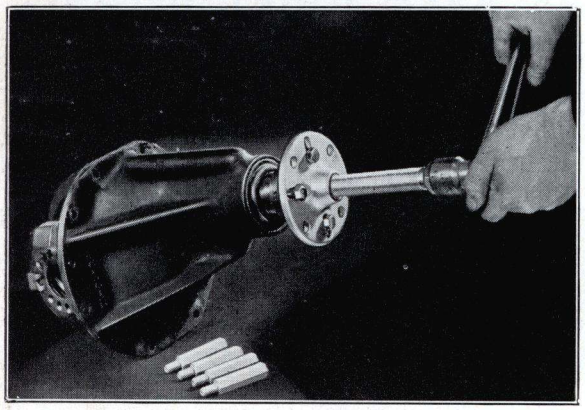


REAR AXLE SHAFT INNER BEARING CUP DRIFTS

C-184 For 1930 to 1935 Plymouth, DeSoto, Dodge and Chrysler Sixes, also 1937 Chrysler and DeSoto Models with double bearing rear axles **$1.75**

C-188 For 1934 to 1937 Airflow Models, Chrysler 65, 75 and Dodge DA Six **$1.75**

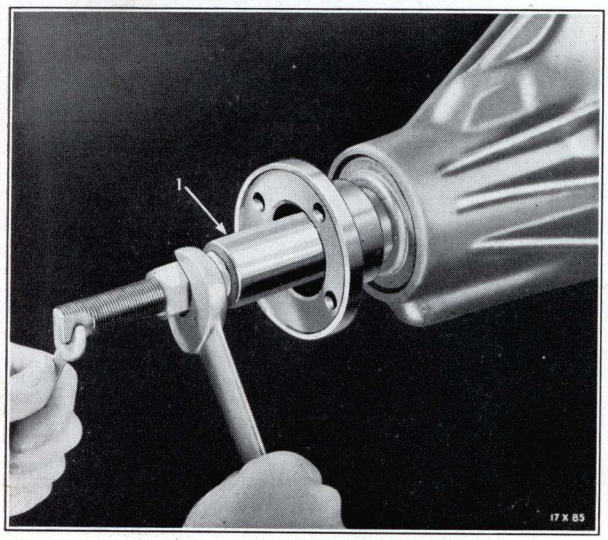
When installing rear axle inner bearing cups with the Miller drifts, the cup is held square with the housing, being quickly, easily and evenly installed. If the bearing cup is allowed to misalign itself in the housing, it will chip the cup or shear a fine layer of metal off the housing. This metal will build up behind the bearing, causing an uneven seat which shortens the life of the axle and bearings.



UNIVERSAL JOINT FLANGE PULLER

C-452 For All Models **$2.45**

Universal joint flanges must be installed very tightly and require this special puller when it is necessary to remove them. Four special studs are supplied with each puller which can be used on several of the models when the universal joint flange bolts are not long enough to bolt the puller to the flange.



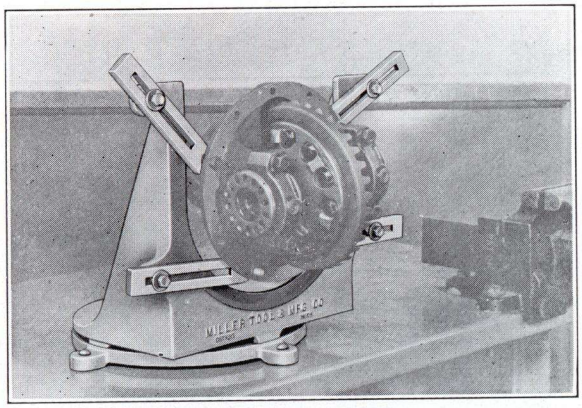
UNIVERSAL JOINT FLANGE INSTALLING TOOL

C-496 For all Passenger Car and Commercial Car Models **$2.25**

By installing the pinion universal joint flange with this tool there is no danger of injuring the pinion gear or ring gear teeth as would be if this flange were driven in place.

Installing the transmission universal joint flange with this tool is equally as important. Driving this flange on is poor practice and may result in damage to transmission gears and bearings.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN

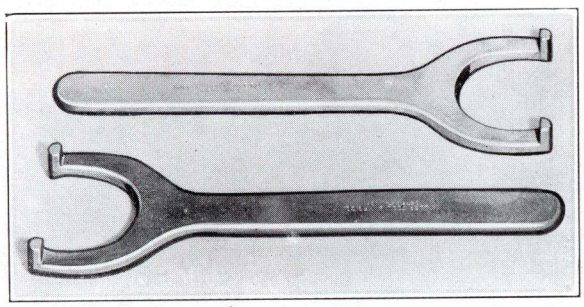


DIFFERENTIAL CARRIER and TRANSMISSION STAND

* **C-399** Bench Type for All Models **$15.00**

All mechanics know how difficult it is to do good work on a transmission or differential carrier while "wrestling" it around on a work bench. It costs the service shop and car owner unnecessary expense.

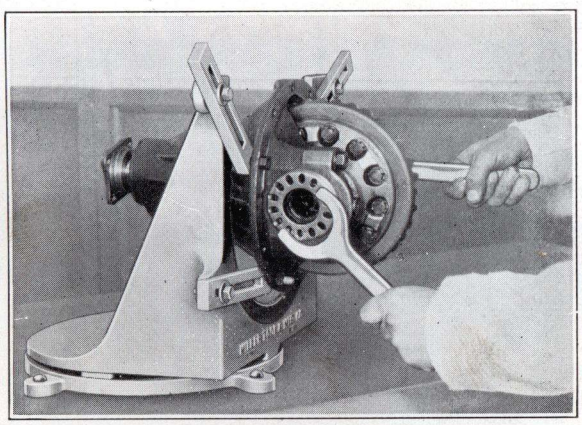
Every service department should have this convenient piece of equipment, its adjustable arms fit practically all sizes and types of carriers and cases. The swivel turntable top allows the work to be quickly swung around to the most convenient angle yet retaining the rigidity of the firmly anchored base. Strongly constructed and exceptionally economical.



DIFFERENTIAL BEARING ADJUSTING SPANNERS

C-406 For all Passenger Car and Commercial Car Models from 1934 to 1938, each . . **$1.65**

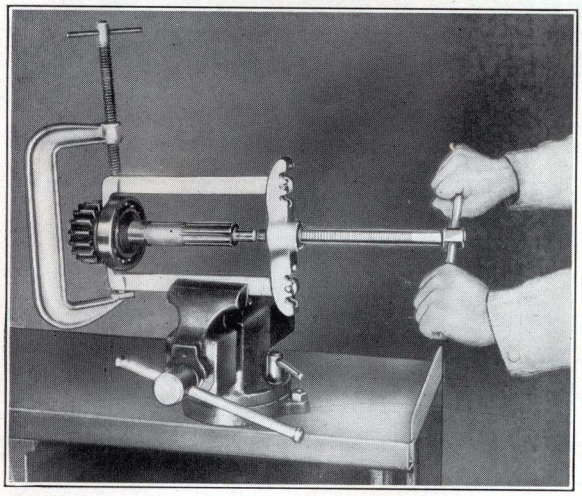
C-406-A Per pair **$2.95**



The hardest job is often made the simplest by using properly designed tools. Adjusting the differential bearings is an easy operation when these spanner wrenches are used and the carrier is securely held at just the right place in the C-399 stand.

These wrenches are carefully machined from steel drop forgings, scientifically heat-treated to "take it." Stop ruining parts with a hammer and a punch — get the "feel" of adjusting these bearings properly — one wrench tightening while the other loosens.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



UTILITY PULLER

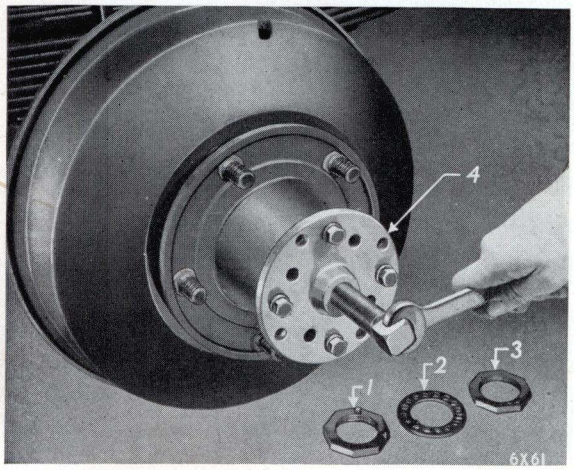
*CM-549 Utility Puller. For All Cars and Trucks **$8.75**

An essential tool in every service shop. Its universal use includes such operations as removing bearing cones and rollers, gears, etc.

This puller is rigidly constructed of heavy chrome alloy steel and the puller screw of heat treated chrome nickel steel.

The illustration shows how the clamp securely holds the tapered jaws behind the part being removed. The long puller screw and jaws permit removing parts located far back from the end of the shaft.

This tool supersedes tool CM-49 which is now discontinued, parts however are available — see parts list in back of book.



REAR WHEEL PULLERS FOR TRUCKS

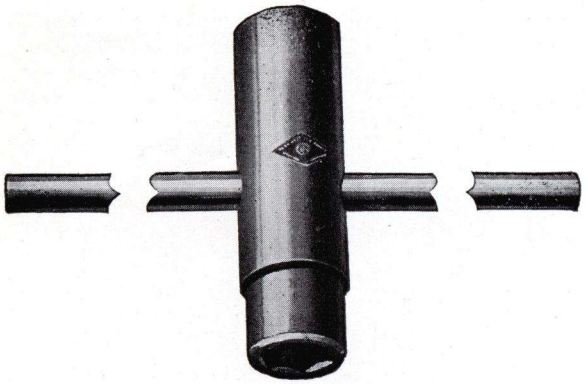
DD-388 For 3 Ton Models **$4.00**

DD-423 For 1½ and 2 Ton Models **$2.85**

Great care should be taken when removing the rear wheels of full floating rear axle trucks. If the wheel is "cocked" while it is being removed it may damage one of the wheel bearings — play safe, use these specially designed pullers.

The flange of the puller is bolted to the wheel hub with the driving cap screws after removing the axle shaft. The large button protects the rear axle tube while removing the wheel with the heat treated puller screw. Two different size buttons are shipped with each puller.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



REAR AXLE and PINION SHAFT NUT SOCKET WRENCH

CM-21 For All Passenger Cars **$2.50**

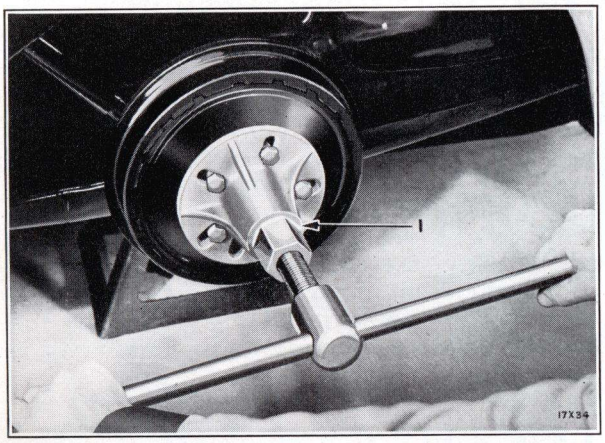
All service departments need a heavy duty socket wrench like this for removing and installing these nuts.

It is made from tough alloy steel, broached on each end to fit 1¼" and 1 7/16" hex nuts and is specially heat treated for toughness. The 1¼" end has been turned down to fit into recesses where there is very little room around the nut. The long heavy handle supplies ample leverage for the tightest nut.

REAR WHEEL HUB PULLERS

***C-319** For all Passenger Cars and ½ Ton Commercial Cars except Chrysler Imperial Models **$3.50**

C-476 For 1937 and 1938 Custom Imperial Models and ¾ and 1 Ton Trucks with semi-floating rear axles **$4.25**

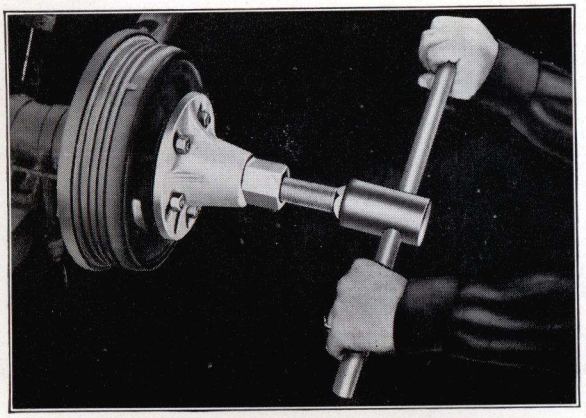


Be sure to use this type of puller and avoid any possibility of damaging rear axle bearings. The puller housings are made from properly reinforced, heat treated steel castings. The puller screws are heat treated chrome nickel steel. Special puller screw wrench must be ordered separately.

REAR WHEEL PULLER SCREW WRENCHES

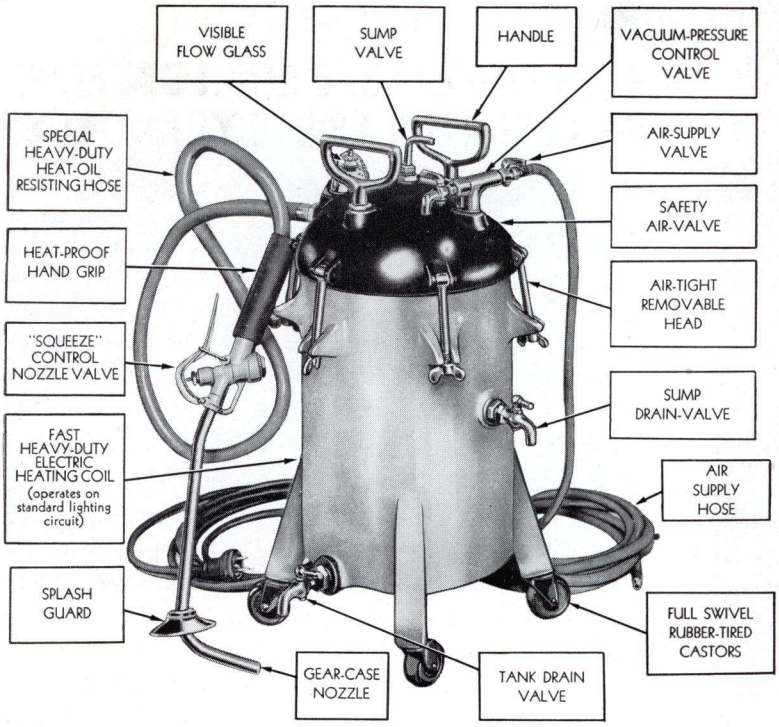
C-214 For 1" Screws **$1.60**

C-444 For 1⅛" Screws **$1.75**



These inexpensive wrenches will give extra life to your rear wheel hub pullers. The long handles supply ample leverage to remove the tightest wheel. Two sizes are available; one for the standard and the other for the late heavy duty wheel puller screws.

MILLER TOOL & MFG. CO. AUTO TOOLS DETROIT MICHIGAN



HOT-OIL FLUSHER FOR HYPOID AXLES

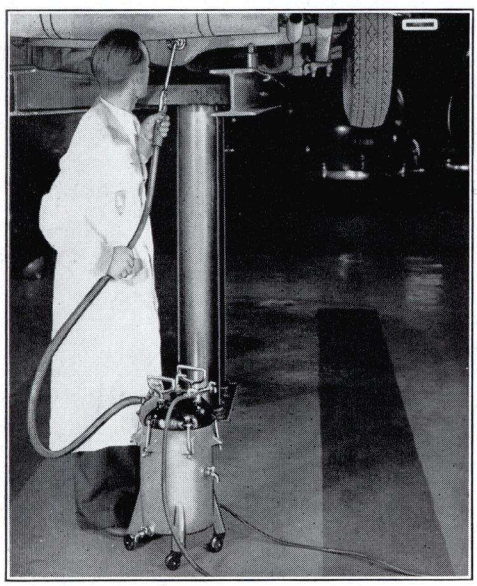
* C-470 For All Models . . **$75.00**

Owners of cars equipped with Hypoid rear axles in most cases know that new hypoid lubricant should not be added to old and that the lubricant should be changed every 10,000 miles being sure that the differential case is thoroughly FLUSHED before new lubricant is put in.

Along with the 10,000 mile change period, Winter and Summer still represent important seasons for hypoid lubrication service. Use this hot oil drainer and flusher.

Completely Drains and Flushes Rear Axles and Transmissions

THE MILLER HOT OIL FLUSHER does a complete job — Insert the nozzle in the differential filler plug, flick the vacuum valve and almost immediately the gear case is completely drained. Flick the valve to pressure and the gears are flushed with hot fresh oil, washing away all trace of old lubricant, foreign matter, etc. Turn the valve back to vacuum and the case is drained entirely dry. Repeat if necessary and the case is ready for clean fresh lubricant. Tank uses only 10 pounds air pressure, eliminating any danger of forcing lubricant past the oil seals and into the brakes. When flushing transmissions, be sure drain plug is removed.



Flusher Operates on Standard 110 Volt Lighting Circuit Only

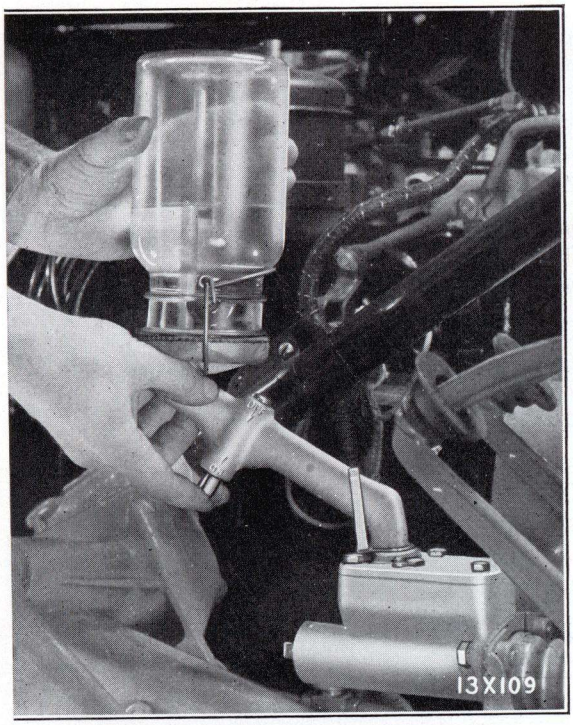
The Miller Flusher Is Efficient

There is no lost motion with the Miller Flusher. Only one large heat and oil resisting hose is used to fill, drain and flush — No spattering or gravity draining of used lubricant or flushing oil is necessary. Waste oil and used flushing oil is sucked into special sump which is emptied at the turn of a valve by air pressure. The large "Squeeze Control" nozzle valve provides fast complete control at the nozzle.

Visible flow glass instantly shows customer and operator movement of lubricant or flushing oil.

Etched instruction plate riveted to every tank provides concise, easily followed instructions — anyone can operate it.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



On some of the later models the filler plug in the top of the master cylinders are of different sizes. Adapters are available to fit these cylinders — supplied in two sizes — large and small.

AUTOMATIC REFILLER FOR MASTER BRAKE CYLINDERS

* **C-362** For All Models. Complete with 2 Adapters **$4.25**

This tool makes the job of filling the master brake cylinder a short simple one — as easy as adding oil to the crankcase. Being fully automatic it shuts off when master brake cylinder is filled — no wasting of brake fluid — no mess on your customer's car.

When bleeding brakes by hand it is indispensable. The C-362 Refiller maintains the proper fluid level when the old fluid is pumped from the wheel cylinders, automatically stopping and starting when fluid is required. This saves much valuable time as the master cylinder is kept continually filled allowing no air to enter system.

The illustration at the left shows a brake cylinder being filled — when the fluid falls below a special vent in nozzle of tool, air enters the refiller and the cylinder is filled — when fluid reaches top of vent it shuts itself off automatically.

PRESSURE HYDRAULIC BLEEDER TANKS

* **C-424** Standard Model less Wheels **$18.50**

* **C-428** Portable Model with Wheels **$21.50**

(See parts list in index)

One man can quickly and efficiently bleed and recharge a hydraulic brake system with this bleeder tank in just a few minutes. It saves fluid — flushes the system free of sludge and sediment and leaves it recharged with fresh, clean fluid. The air pressure in the bleeder tank eliminates necessity of pumping brake pedal and using extra man.

Every tank is equipped with a "Pop-off" safety valve. 100 lbs., pressure gauge — standard air intake valve — large filler plug — 10 feet of heavy duty connecting hose (20 feet of hose optional at slight additional cost) — set of four adapters with swivel connection. Tank has four-gallon capacity and is tested at 200 pounds pressure. All seams are heavily welded. It is a heavy duty unit for real service work.

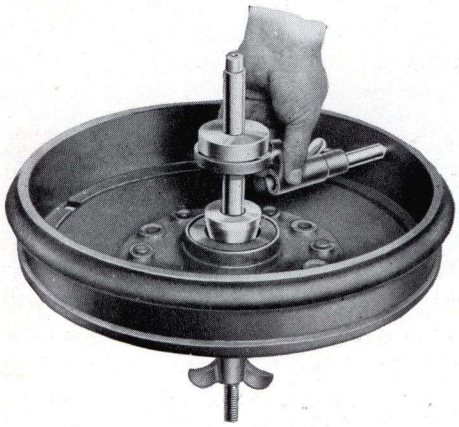
Many shops prefer the handy portable model. The carriage assures prompt hydraulic brake bleeder service at all points of the shop. Also available without wheels.

Miller *TruBrake* System

The principal of the Miller TruBrake System of servicing internal expanding brakes is to adjust the brake shoes and linings to the exact drum size and thereby insure a maximum lining contact with the brake drum.

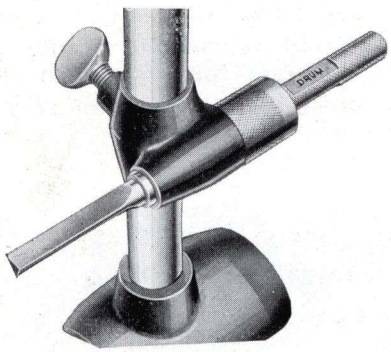
This is easily accomplished in three major steps. 1st the brake drum is checked for size and concentricity *from the wheel bearings.* 2nd the Brake Linings are accurately ground concentric with the wheel bearings. 3rd Brake Shoes are correctly adjusted to proper brake drum clearances.

The following illustrations and descriptions clearly outline the speed and accuracy of the Miller TruBrake System of reconditioning internal expanding brakes.



EACH BRAKE DRUM CHECKED FOR SIZE, CONCENTRICITY AND TAPER

Accuracy is essential to quiet efficient brakes. Each drum is checked for size with a special centering arbor and cones directly from the wheel bearings on which the wheel revolves when running. The telescoping drum gauge quickly indicates an out of round or tapered drum condition while being set to exact drum size. Inasmuch as one drum may have been rebored and another not; each drum is checked individually.

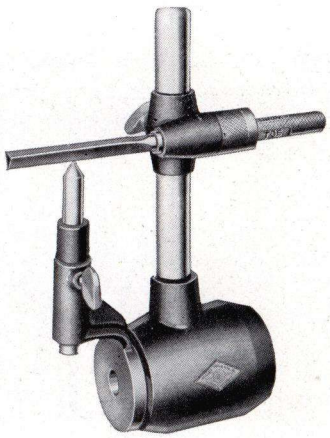


SPECIAL ARBOR ELIMINATES USE OF FEELER GAUGES

The Miller TruBrake Gauges are equipped with this special three point gauge arbor. It has three sides — one, which is standard, is called "DRUM." The other two are ground .006" and .012" under this and marked heel and toe thereby allowing correct clearance without feeler gauges. **Always check with the pointed edge of the arbor against lining.**

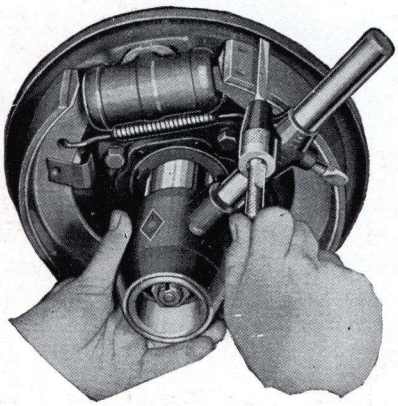
GAUGE SET TO DRUM DIAMETER

The illustration at the right shows the drum gauge installed in the brake fixture and the three point gauge arbor set to standard drum diameter.



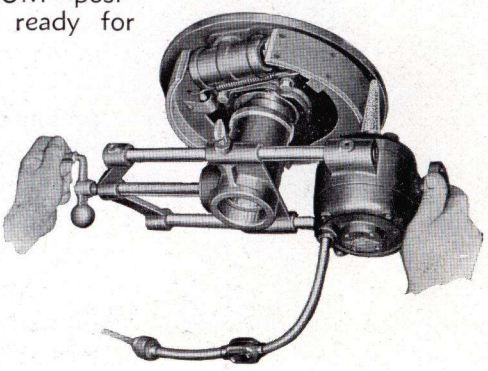
SHOES ADJUSTED TO DRUM DIAMETER

By using the correct adapter bushing the brake gauge is installed on the front spindle or rear axle shaft. Adjust the high spots of the brake lining to the pointed edge of the three point arbor, with the arbor in "DRUM" position. Lining is now ready for grinding.

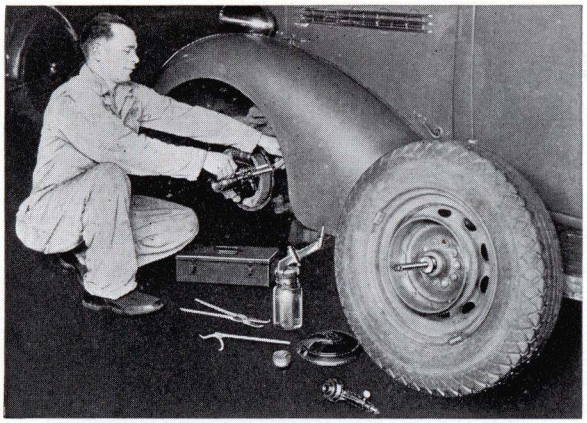


Grinds Brake Lining True and Concentric on Car

Install lining grinder and adjust to high points. Grind lining until full contact is obtained over entire length and width of lining. Remove grinder and install brake gauge adjusting "Toe" and "Heel" of brake shoe to "Toe" and "Heel" edges of three point arbor.



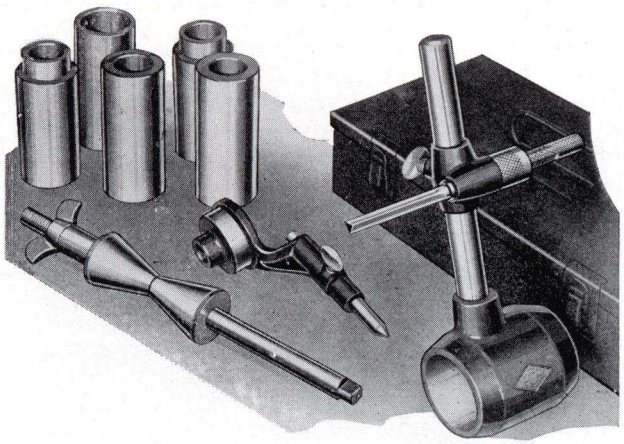
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



MILLER TRUBRAKE EQUIPMENT AVAILABLE IN VARIOUS SETS

This special equipment has been especially designed for servicing hydraulic brakes; it is accurate — compact and easily operated. Both the brake gauge and brake lining grinder are available in both passenger car, truck or combination truck and passenger car sets. A truck adapter kit may be added to the passenger car brake gauge to make it adaptable to both passenger cars and trucks.

Bushing Chart and Parts List Packed with each tool can also be referred to on page 72.

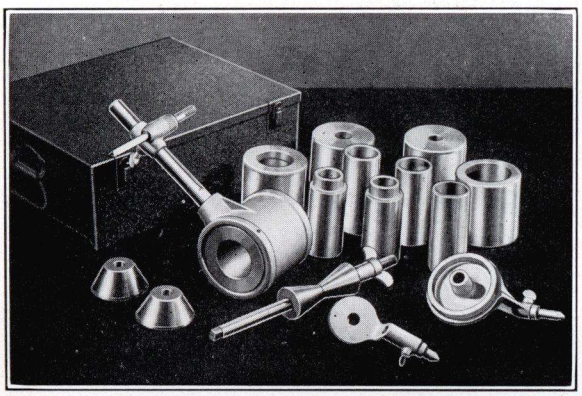


MILLER TRUBRAKE DRUM CHECKING AND BRAKE SHOE GAUGE FOR PASSENGER CARS

MT-19-C Packed with six most popular bushings number 31, 32, 41, 44, 47 and 70 ..... **$39.50**

(Chrysler dealers should order MT-19-E which includes bushings 34 and 35, for larger Chrysler models **$43.50**

Service Departments requiring only passenger car equipment will find this set very well adapted to their requirements. Preserve original factory brake efficiency by servicing brakes in your service department with Miller TruBrake equipment. Adjust each set of brake shoes to proper clearance to each individual brake drum.

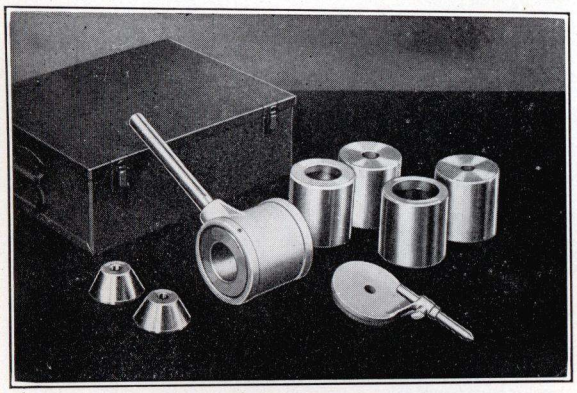


MILLER TRUBRAKE DRUM CHECKING AND BRAKE SHOE GAUGE FOR PASSENGER CARS AND TRUCKS

MT-34-B Packed with bushings 31, 32, 34, 35, 41, 44, 47, 50, 70, 249 and 255 for popular passenger cars and 1937 and 1938 Trucks up to 2 Ton Models. 3 point gauge arbor for trucks also included **$69.50**

Extra Truck Bushings, each **$4.00**

This unit is especially designed for the service department, servicing both passenger cars and trucks. A reducer sleeve is supplied to adapt the brake gauge for the large and small bushings. Extra bushings may be secured as desired for other than current models.

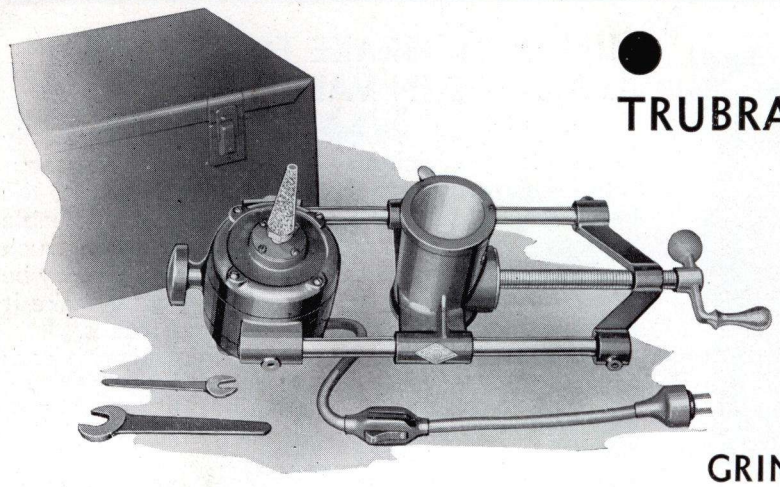


TRUCK ADAPTER KIT FOR PASSENGER CAR TRUBRAKE GAUGE

MT-34-S Packed as illustrated with bushings 34, 35, 50, 249 and 255, also 3 point gauge arbor for trucks **$30.00**

Dodge dealers who have an MT-19-C may order this kit which, when used with their present equipment will service 1937 and 1938 1½ and 2 Ton Trucks.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN



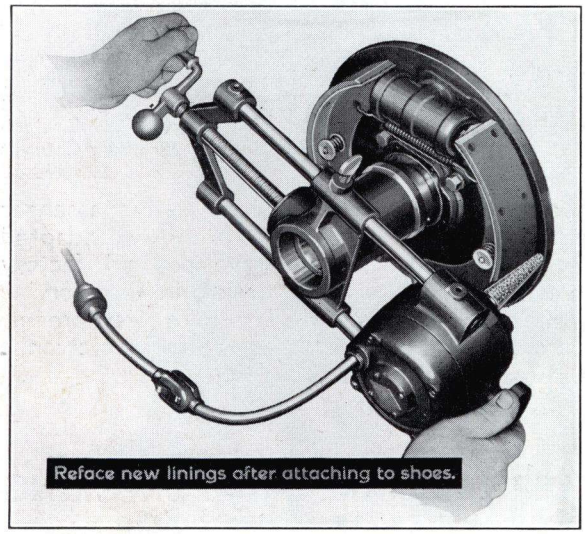
TRUBRAKE LINING REFACERS

MT-29 For All Passenger Cars, Refacer equipped with 110 volt, universal cycle motor and 12 grinding sleeves **$62.50**

MT-44 For Trucks and All Passenger Cars. Refacer equipped with 110 volt, universal cycle motor, one long and one short grinding arbor with 12 grinding sleeves for each .. **$72.50**
For other than 110 volt motors specify voltage and cycle and add **$5.00**

GRINDING ELIMINATES NOISY BRAKES

Brake noises are usually caused by improperly adjusted brakes, and especially those having high spots. The Miller TruBrake Refacers grind the brake shoes on the car insuring full brake lining contact which eliminates most causes of brake squeak and noise.

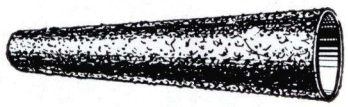


Reface new linings after attaching to shoes.

RUGGEDLY CONSTRUCTED

The double arm slide of the Miller Refacers insures smooth, non-springing adjustments.

Motors are equipped with ball bearings and are totally enclosed to keep out dirt. Electric cord is fitted with switch and swivel connection allowing free full swinging action. Tapered grinding arbor reaches under overhanging dust shields, such as those on 1938 models. Compensating angle is built into motor housing to produce straight-across grinding.



GRINDING SLEEVE

GRINDING SLEEVES

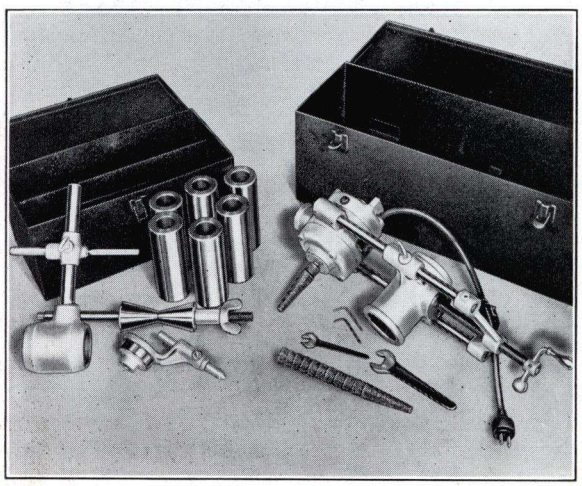
Grinding sleeves are self tightening yet may be easily installed and removed on tapered grinding arbor.

MT-29-70 Standard Passenger Car Type, per dozen **$0.95**

MT-29-76 Special Small Size, per dozen **$0.95**

MT-44-72 Truck Type, per dozen **$1.15**

Detail part numbers on MT-29 and MT-44 grinding arbors will be found on pages 72 and 73.



COMBINATION SETS — MILLER TRUBRAKE, BRAKE SHOE GAUGE and LINING REFACERS

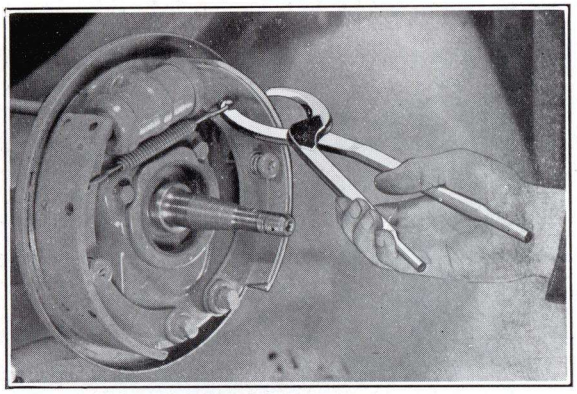
MT-39 Combination MT-19-C Gauge with bushings and MT-29 Refacer **$93.50**

MT-49 Combination MT-34-B Gauge with bushings and MT-44 Refacer **$132.50**

Save Money — Buy a Combined Set

Complete your brake service department by ordering both a TruBrake drum and brake shoe gauge with a TruBrake Lining Refacer and save money.

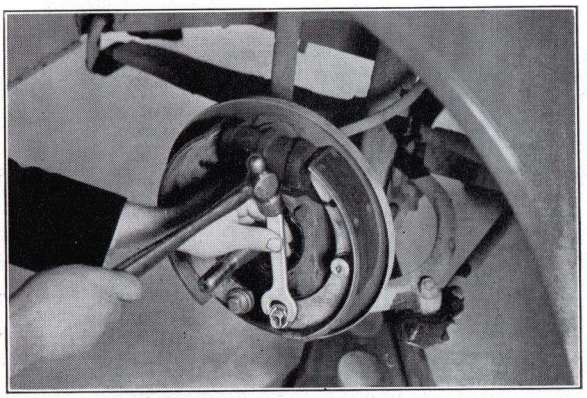
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



BRAKE SPRING PLIERS

* C-312 — For All Models **$1.45**

Installation and removal of the brake shoe return spring is greatly facilitated through the use of this tool. The hooked claw is hooked into the loop of the spring and the pointed claw held against a convenient brake lining rivet. The spring is then quickly snapped in or out of position.



BRAKE SHOE ANCHOR BOLT LOCK WASHER REMOVING TOOL

C-443 — For all Passenger Cars except Chrysler Imperials **$1.00**

Through the use of this special tool the brake anchor bolt lock washers may be easily removed in good condition. They can then be replaced without wasting considerable time in straightening them as is often necessary if the washers are hammered off.

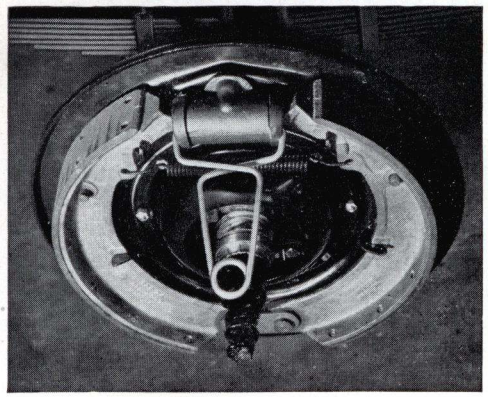
BRAKE LINING RIVETING TEMPLATES

C-198 — For Passenger Cars up to 1936 . . **$3.50**
(Consists of 2 templates)

C-423 — For 1937 and 1938 Passenger Cars **$3.50**
(Consists of 1 template)

It is very important to hold the brake lining tightly to the brake shoe while it is being riveted in place. These spring steel bands clamp around the shoe stretching the lining flat against the shoe.

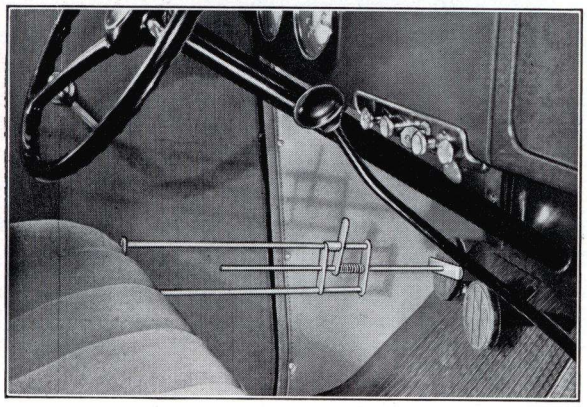
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN



BRAKE CYLINDER CLAMPS

* C-416 Set of 4 Clamps for All Models **$1.00**

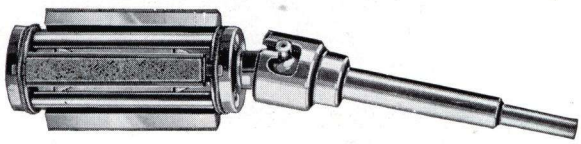
Your brake Service Department can use several sets of these handy spring steel clamps that fit all sizes of brake cylinders. They are instantly appreciated by all brake mechanics for holding brake pistons in cylinders when the brake drum is removed. Saves brake fluid — extra bleeding of lines and loss of time. Brake drum cannot be installed without removing clamp. One clamp fits all sizes of cylinders — four clamps required to a car. Four clamps to a set.

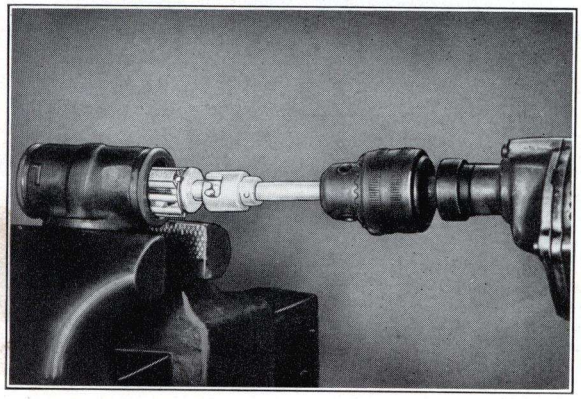


BRAKE AND CLUTCH PEDAL DEPRESSOR

* C-433 For All Models **$0.75**

This simple inexpensive tool saves the work of an extra man. Instantly adjustable from 14" to 25" through trigger type release. Broad base does not damage upholstering. Indispensable when adjusting clutch or brakes and is also very helpful when installing oil pan, upholstery, etc.





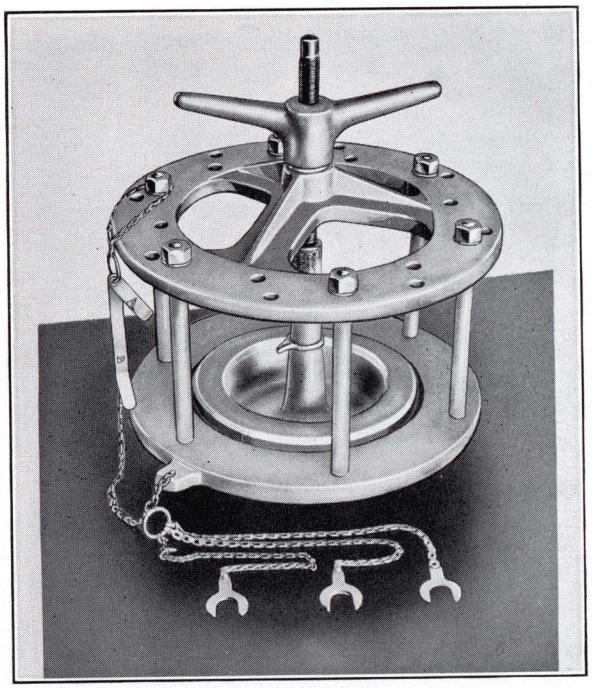
BRAKE CYLINDER HONE and LAP, 1" to 1⅝"

* C-315 Complete with 2 sets of Grinding Stones and 2 sets of Felt Laps . **$20.00**
1½" to 1¾" Stones and Laps for Truck Cylinders are also available, see tool parts list.

This tool used with any small size electric drill quickly and accurately refinishes both master and wheel cylinders, including the double stepped type.

Grinding stones are used with lubricating oil to grind out deep scratches. The cylinder is then lapped (to a mirror like finish) with felt laps and fine valve grinding compound.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN



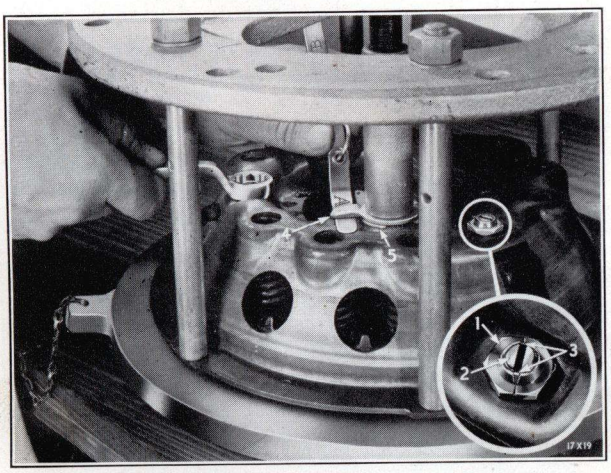
CLUTCH COMPRESSING AND ADJUSTING FIXTURE

C-411 For All Models except 3 Ton Trucks, including 1938 adapters **$18.75**

This fixture should be in all dealers and distributors service departments to insure accurate and efficient clutch service. It is used whenever adjusting Clutches or replacing Clutch parts in all Chrysler Motors products, including Trucks. An Adjusting Gauge Plate is built into the heavy face plate, eliminating a separate part. With the use of the feeler gauges "A" and "B" Clutch Release Levers may be set parallel and to the correct height, according to factory clutch engineers specifications. These gauges are fastened securely to the fixture, avoiding any possibility of their becoming lost. The top spider is equipped with independent legs which allows the clutch housing to be quickly and easily compressed from its outside edge, avoiding any possibility of distortion in the housing. These legs accommodate both six and eight bolt clutch housings. The long main puller screw is extended through the fixture, making it easy to attach this tool to any work bench so that it will become a permanent fixture in your service department.

ADJUSTING CLUTCH RELEASE LEVERS

Compress clutch until housing rests squarely on face plate and adjust levers for various models as indicated at left. Recheck each lever after final adjustment. Stake lock nut before assembling clutch in car as per circle diagram.



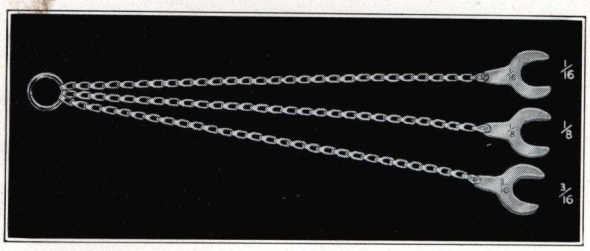
1938 Models

For 1938 Plymouth, DeSoto, Dodge and Chrysler C-18 models, also for 1938 Commercial Cars and 1½ Ton Trucks equipped with clutch baffle plate, insert 1/16" adapter, see part No. 5 in left hand illustration, UNDER extension gauge A as shown. Adjust release levers with thickness blade "A." Hold extension gauge and adapter tight against hub with lock nut on main screw.

For 1938 Chrysler C-20 and 1938 2 Ton Trucks equipped with clutch baffle plate, insert 1/8" adapter under extension gauge and use thickness blade "A."

For 1938 Taxicabs and Chrysler C-19 insert 3/16" adapter under extension gauge and use thickness blade "A."

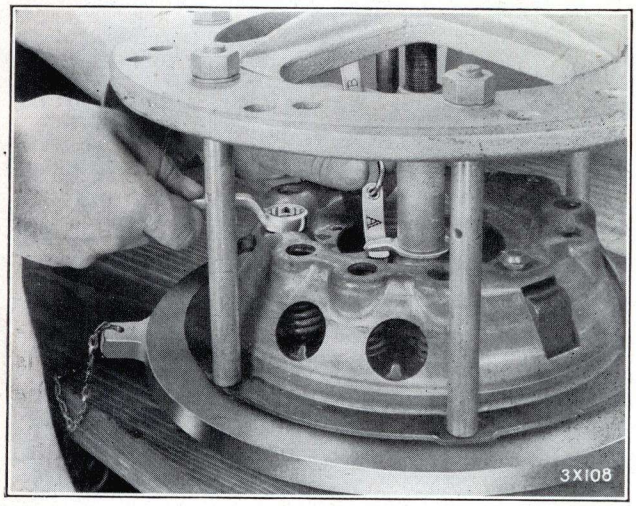
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN



1938 ADAPTERS AVAILABLE SEPARATELY

C-411-34-A Set of 1/16", 1/8" and 3/16" adapters on chain **$1.50**

All dealers having C-411 fixtures without these 1938 adapters should order this set at once, to modernize their present equipment.



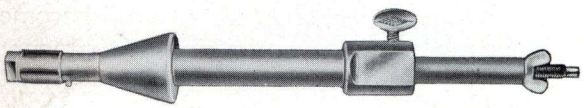
1934 to and Including 1937 Models

These models do not use any adapter under extension gauge. Adjust levers with thickness blade "A" only as shown in illustration 3 x 108.

1932 and 1933 Models

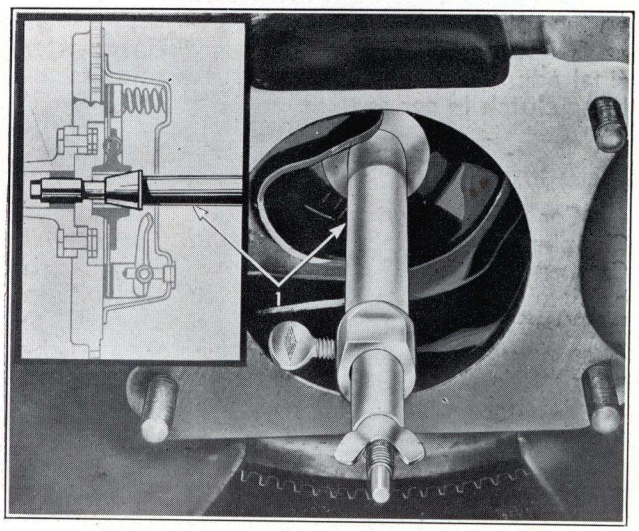
Adjust levers with thickness blade "B" only. No adapter to be used under extension gauge.

C-364 Early type clutch fixtures can be modernized — order C-411-M Modernizing Kit **$7.75.**



UNIVERSAL CLUTCH PLATE ALIGNING ARBOR

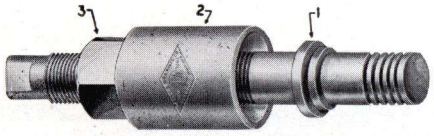
* **C-360** For All Models **$3.50**

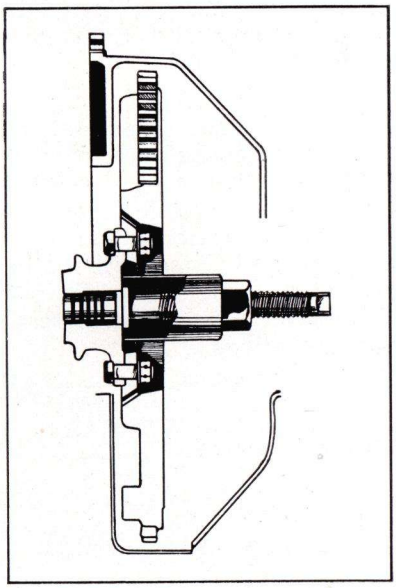


If care is not taken in centralizing the clutch driven plate, it may be bent or damaged, when the transmission is installed and cause unsatisfactory clutch operation; usually a chatter or dragging effect.

The C-360 Clutch Plate Aligning Arbor correctly aligns the driven plate, as shown at the left, on practically all present passenger cars. It is equipped with an expander bushing which is tightened in the clutch shaft pilot bushing, in the end of the crankshaft — perfectly centralizing the arbor. The tapered cone engages in the hub of the driven plate and the sleeve and lock collar, hold it firmly against the flywheel, while the clutch assembly is bolted in place. The arbor is then easily removed by releasing the expander bushing.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



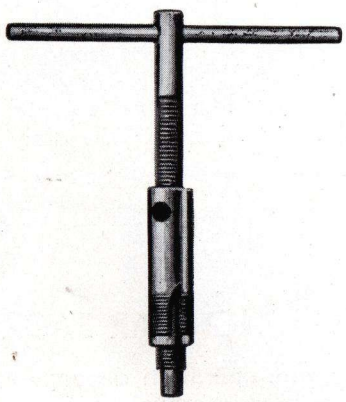


CLUTCH SHAFT PILOT BUSHING INSTALLING AND BURNISHING TOOL

DD-286 For All Models **$6.00**

This tool is used as a drift for installing the clutch shaft pilot bushing, as well as to burnish it to size.

The bushing is slipped over the pilot and driven in place with a soft hammer. The bushing contracts and tightens on the DD-286. Install cup and puller nut and remove tool from bushing. This burnishes the bushing to the exact size and gives it a very smooth and lasting finish. When removing bushing use tool C-41.

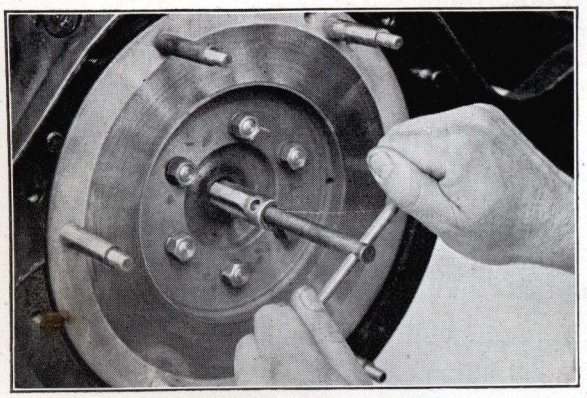


CLUTCH SHAFT PILOT BUSHING REMOVER

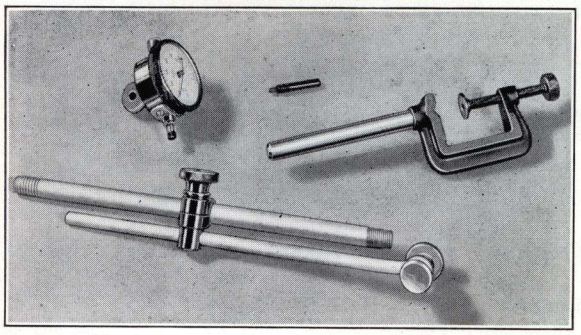
C-41 For All Models **$2.50**

On most clutch overhaul operations, the clutch shaft pilot bushing in the end of the crankshaft needs replacing. This tool will save a considerable amount of time in removing the old clutch shaft pilot bushing.

The hard tapered pilot is first screwed into the soft bronze bushing so that it makes its own threads and gains a solid grip on the bushing. The puller screw is then turned into it and as it strikes the bottom of the hole in the crankshaft, the bushing is forced out of the crankshaft. Be sure and use tool No. DD-286 for installing and correctly burnishing the new bushing to size.



MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN

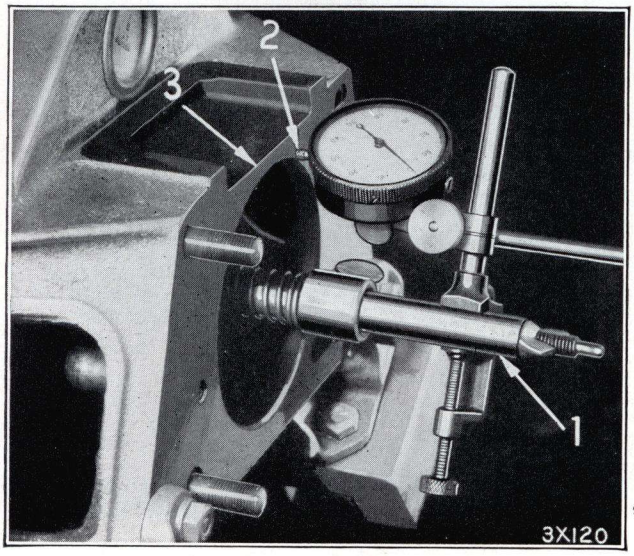


DIAL INDICATOR, CLAMP AND SWIVEL

* C-430 Complete as illustrated for All Models **$12.75**

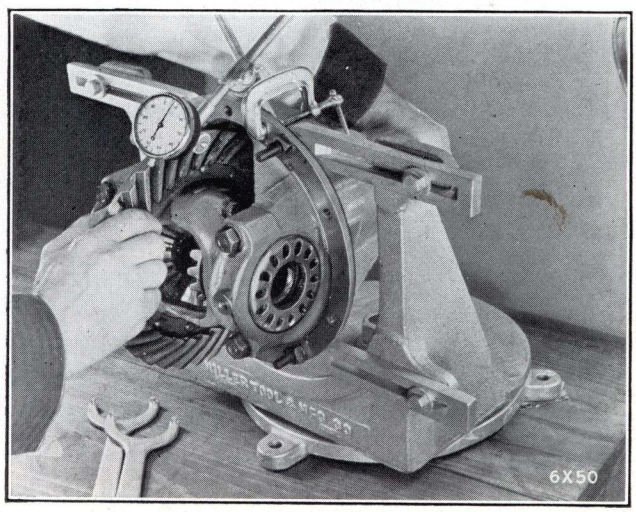
Many important and exacting alignment checking operations can be performed with this simple set of tools.

Each set includes a "plus" and "minus" 1¾" diameter, dial indicator which is calibrated in 1/1000 of an inch and fitted with both a short and long extension. The small "C" clamp and the rods with swivel allow many different combinations of installations.



CHECKING CLUTCH HOUSING

Correct alignment of the clutch housing face and counterbore is important to satisfactory transmission performance. By using the C-360 clutch plate aligning arbor in the clutch pilot shaft bushing in the end of the crankshaft a rigid center is obtained. By attaching the "C" clamp to the C-360 arbor and adjusting the swivel, rods and indicator as illustrated the whole assembly may be rotated around the clutch housing face by cranking the engine by hand. Any irregularity of alignment quickly registers in thousandths of an inch on the dial indicator.



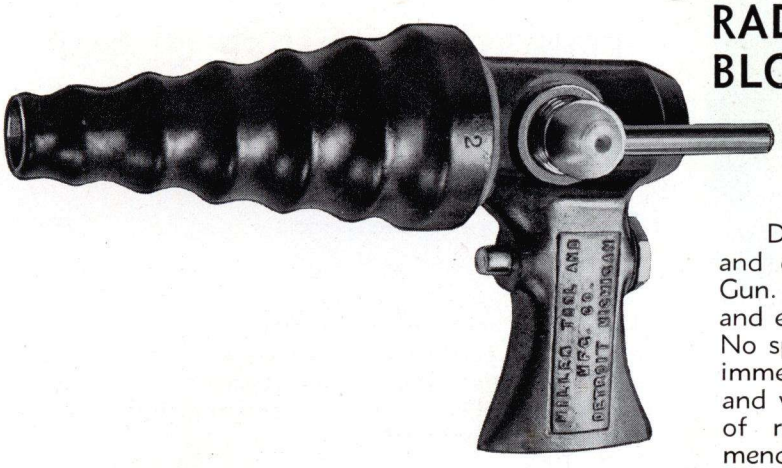
CHECKING RING GEAR BACK LASH

Quiet rear axle operation depends to a large extent on the proper adjustment of the rear axle ring gear. Your factory shop manual specifies this adjustment in thousandths of an inch. By using this arrangement of the C-430 parts the ring gear back lash can be measured on practically any rear axle.

SAME INDICATOR IS USED ON C-435 TIMING GAUGE

The same dial indicator may be used for checking alignment of various parts, back lash, axle shaft end play and also for setting ignition timing. All parts of this and other Miller tools may be purchased separately — see tool parts price list in back of book when ordering.

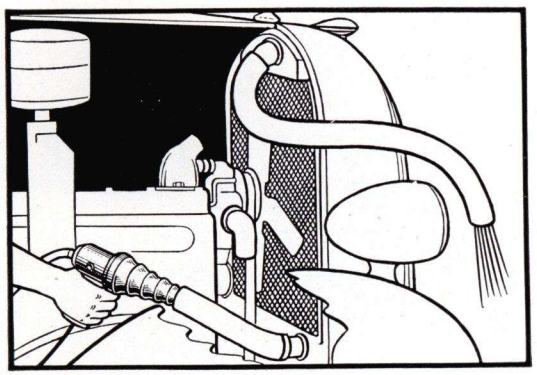
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN



● MILLER "REVERSE FLOW" RADIATOR and ENGINE BLOCK FLUSHING GUN

* C-311 ● For All Models . . . **$4.50**

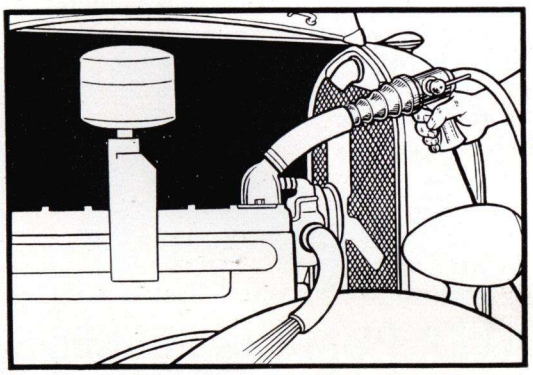
Dirty, overheating radiators are quickly and easily pressure flushed clean with this Gun. It is made of non-corrosive materials and equipped with both air and water valves. No special equipment required to put it into immediate service, attaches to standard air and water connections. Nozzle fits all sizes of radiator hose. Enthusiastically recommended by leading Motor Car and cleaning compound manufacturers.



Flushing Radiator

FLUSHING RADIATOR

Disconnect upper and lower radiator hose. Never flush radiator while connected to engine block, rust from block will be forced into radiator core and may permanently clog it. Connect overflow tube to upper hose connection, (old inner tube cut in half makes a good one). Install Gun in lower radiator hose and turn on water. When it begins to flow freely from overflow tube, apply air cautiously in short spurts to generate pulsing action. Use a reputable cleaning compound for best results.



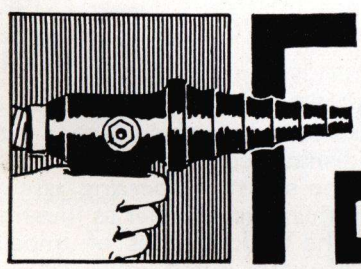
Flushing Engine Block

FLUSHING ENGINE BLOCK

Connect upper hose connection to block and install gun as illustrated. Turn on water and allow block to fill with water, then apply air in short spurts to loosen scale and dirt which is blown out lower connection. Be sure to remove thermostat.

SELLS ACCESSORIES

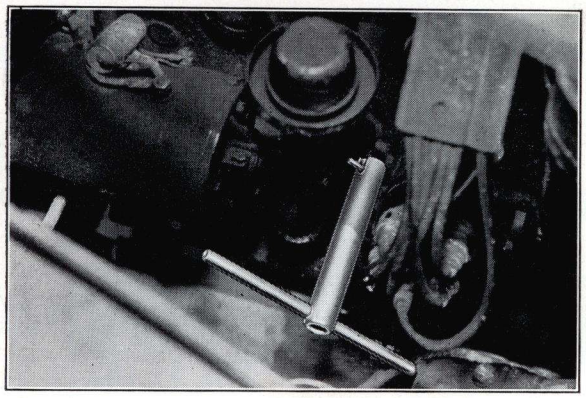
Hose connections, fan belts, cleaning compounds and many other accessories are easily sold to customers who purchase radiator cleaning service. Secure one of these guns and start this profitable service now.



FLUSH GUN

FOR RADIATOR AND ENGINE BLOCK

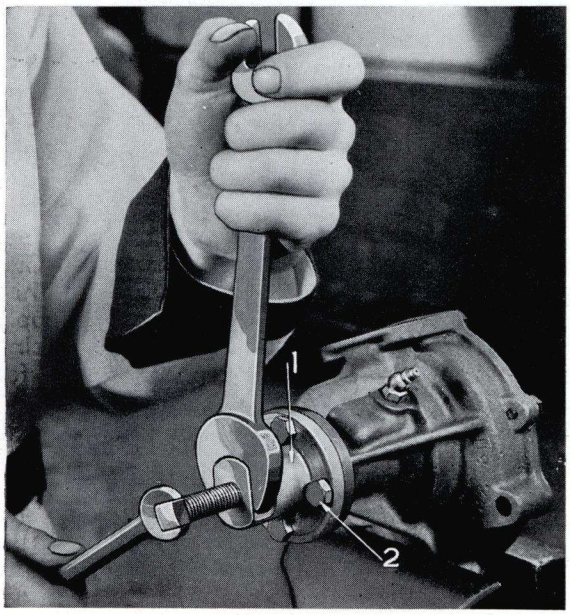
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



LOWER CYLINDER BLOCK WATER DRAIN COCK WRENCH

C-454 For All Late Models **$0.95**

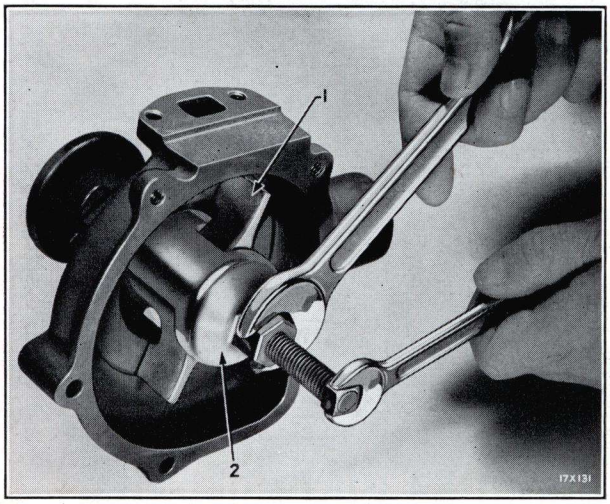
This drain cock may easily be removed with this special inexpensive wrench. It engages the complete valve so that a replacement unit can be quickly installed without interfering with the distributor or other parts.



WATER PUMP FAN HUB PULLER

C-412 For All Packless Type Pumps **$1.50**

This small inexpensive tool will save its cost many times over in time and material when servicing the packless type water pumps. Attaches to water pump fan hub with fan blade bolts. Its use avoids shearing water pump impeller pin or damaging impeller when disassembling pump. Be sure to remove fan hub dowel pins before attempting to remove hub.

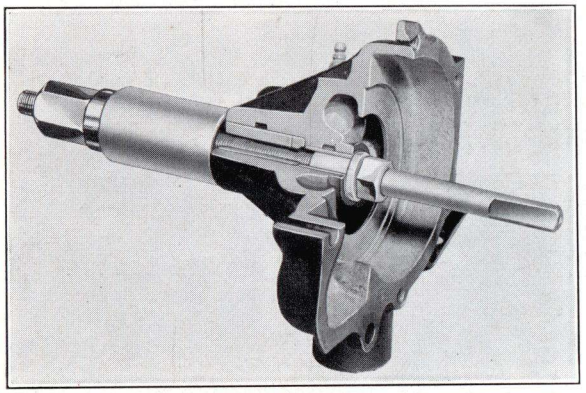


WATER PUMP IMPELLER PULLER

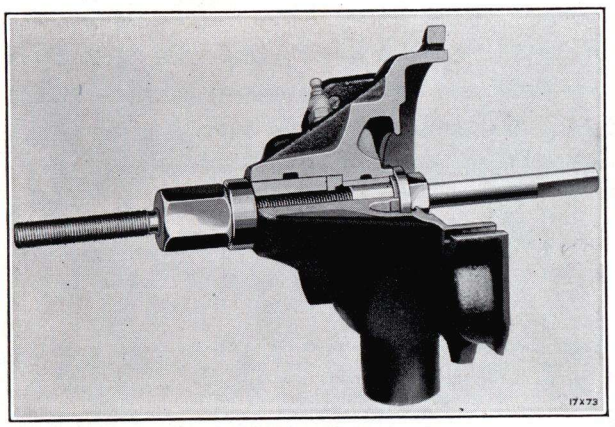
C-498 For permanent lubricated ball bearing type pumps used on Chrysler C-19 and C-20, also 1938 1½ and 2 Ton Trucks **$1.85**

When servicing this type of water pump the impeller must be removed before the remainder of the pump can be dismantled. Removing the fan hub will not allow the shaft and bearing assembly to be removed. Use this special puller as illustrated and safely remove the various sizes of impellers found in this type of water pump.

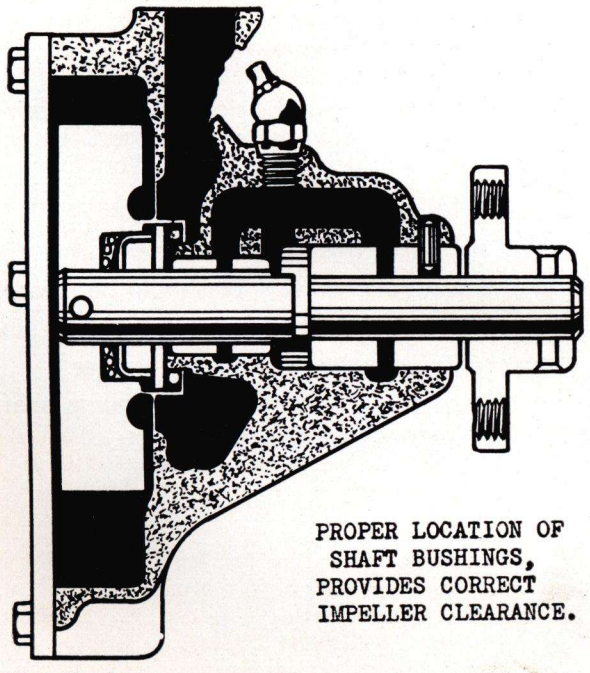
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN



Illus. No. 1 *Removing Bushings*



Illus. No. 2 *Installing Bushings*



Illus. No. 3

WATER PUMP SHAFT BUSHING PULLER and INSTALLING TOOL

C-373 For All Packless Type Pumps with Bushings **$3.75**

(Tool sold only as complete matched unit, return old tool when ordering replacement parts.)

Efficient, water tight operation of this type water pump is largely dependent upon the proper location of the water pump shaft bushings.

The water pump fan hub should have .003″ end clearance with the front bushing. The rear bushing must be located below the water pump seal washer seat so as not to interfere with the water pump seal washer. This tool has been designed not only to remove and install these bushings but also to accurately locate them in their proper positions.

REMOVING BUSHING

After removing the water pump fan hub with puller C-412 the pump shaft assembly can be removed. Dowel pin should then be removed from front bushing. Install tool bushing Number 2 on main puller screw of tool C-373. Insert through water pump, install cup on opposite end of screw and pull bushings into cup with large hex. nut as shown in illustration Number 1.

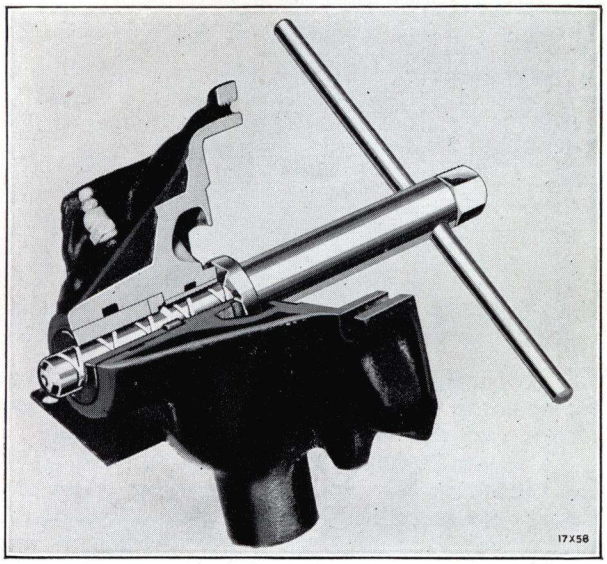
INSTALLING BUSHINGS

Install tool bushing Number 3 and rear water pump bushing on C-373 puller screw and assemble through water pump. Assemble water pump shaft thrust washer over projecting threaded end of C-373 puller screw, next assemble front water pump bushing.

Install C-373 thrust bearing and large hex. nut. Tighten nut, drawing bushings in place until top edge of hex. nut lines up with lower edge of groove in C-373 puller screw. Illustration No. 2 clearly shows how bushings are accurately located. After removing bushing puller drill front water pump bushing for dowel pin using hole in water pump housing as guide and install dowel pin.

Line drawing indicates how important proper location of bushings is to efficient operation of water pump. It provides approx. 1/16″ clearance on each side of the water pump impeller after pump is completely assembled. .003″ shaft end play is obtained when assembling water pump fan hub. This should be measured between fan hub and front water pump bushing as indicated in the shop manuals.

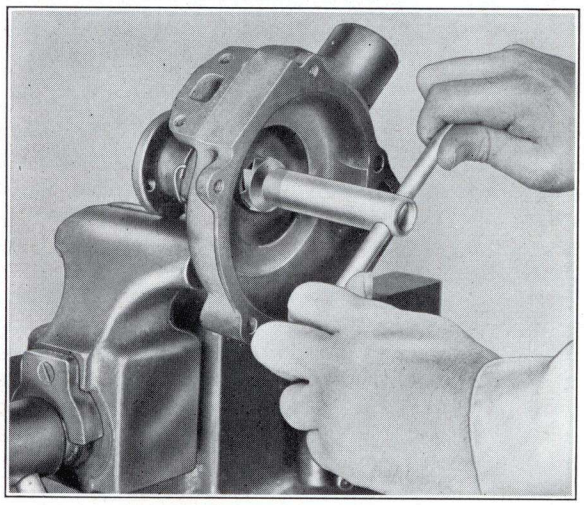
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



WATER PUMP BUSHING LINE BURNISHER and HOUSING SEAT REFACER

C-384 For All Packless Type Pumps **$7.50**

After the bushings have been carefully installed with the C-373 Puller they must be finished to size. The accurately ground diameters of this burnisher do not remove any metal but squeezes the metal to a smooth lasting finish to the exact size required. The cutter faces the water pump housing to a new water tight seat for the water seal washer. A pilot bushing is supplied to align burnisher on pumps equipped with roller bearing and bushing.



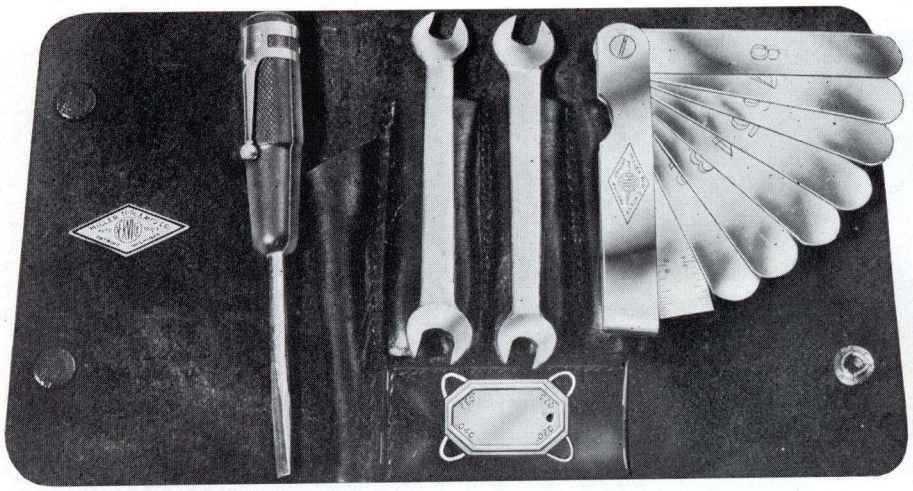
WATER PUMP HOUSING SEAT REFACER

C-502 For permanent lubricated ball bearing type water pumps on Chrysler C-19 and C-20, also 1938 1½ and 2 Ton Trucks **$3.50**

When servicing this type of water pump the seat for the seal retainer washer should be refaced smooth and true. This provides a water tight seat for a new water pump seal retainer washer.

The refacer pilots over the water pump shaft to accurately reface seat true with shaft.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN



MILLER PRECISION KIT

* C-402 For All Models — each **$1.75**

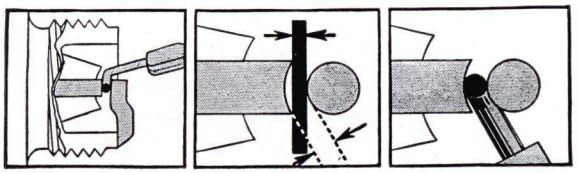


Fig. 1 *Fig. 2* *Fig. 3*

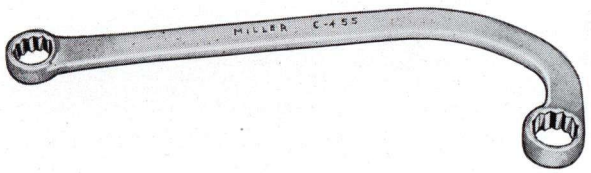
Gap below the surface of shell cannot be reached with ordinary spark plug feeler gauge.

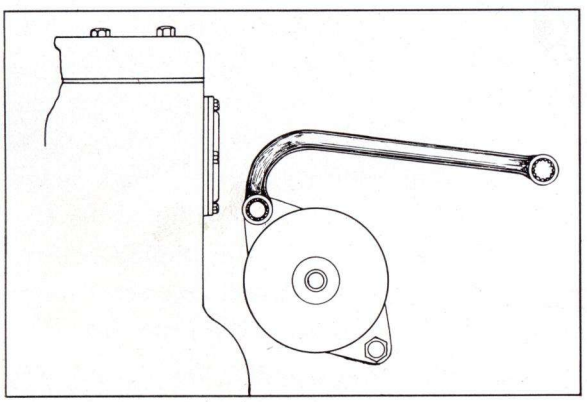
Flat feeler gauge shows this gap to be .018". *Actual gap measured with round feeler gauge is .025".*

Notice how the round spark plug gap gauge correctly measures the actual gap between the electrodes.

Every mechanic and service man should have one of these kits. They contain all first quality tools neatly pocketed in a genuine leather case. Contains two heat-treated, drop forged, milled opening distributor wrenches, small screw driver with insulated handle and carefully tempered blade — exceptionally complete feeler gauge which includes small accurate inch scale and new type round feeler, spark plug gap gauge. Illustrations at left clearly show necessity of using this new type spark plug gap gauge.

Order one of these kits for each of your service men — they can only be as accurate as the tools they use.





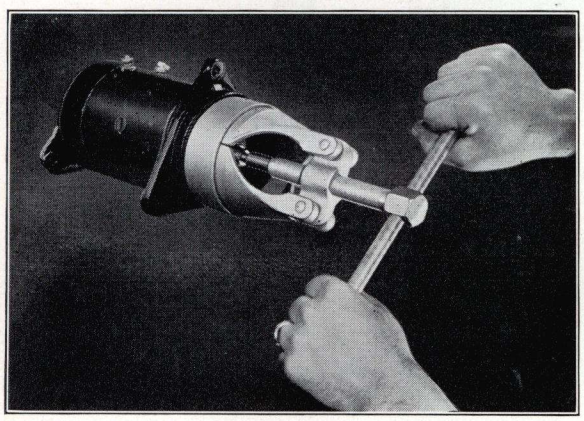
STARTING MOTOR FLANGE NUT WRENCH

C-455 For All Models **$1.00**

The starting motor inner flange nut is located between the engine and starting motor making it inaccessible with a standard wrench.

This wrench is made of forged tempered steel especially designed for adjusting this nut. Save time and skinned knuckles by purchasing this wrench.

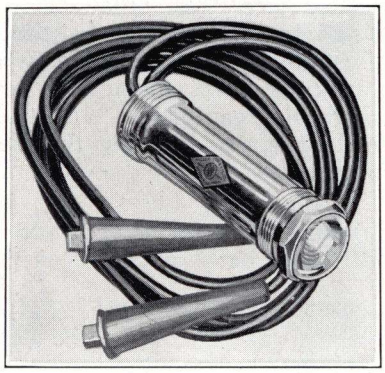
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



GENERATOR PULLEY PULLER

C-453 For All Air-cooled Generators with Pressed Metal Pulleys **$4.95**

Late model cars are equipped with air cooled generators having pressed metal pulleys. When servicing these generators off the engine this pulley must be carefully removed — this simple puller, especially designed for this work removes the pulley quickly and safely.



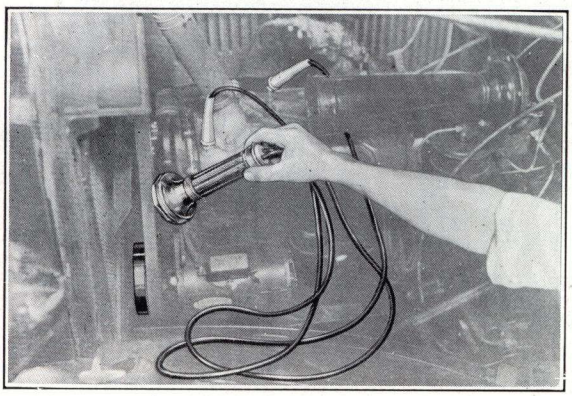
SPARK ADVANCE CHECKING LIGHT

* **C-374** For All Models **$5.60**

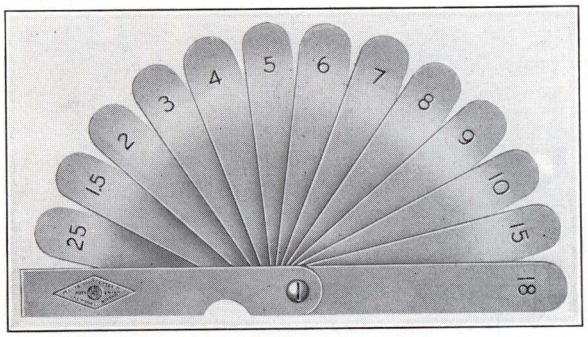
This instrument is equipped with a very fast lighting gas tube and may be used advantageously to Synchronize Dual Distributor Points and Check Automatic Spark Advance (with engine running) on those cars where the ignition timing marks appear on the impulse neutralizer, fan belt drive pulley or flywheel. It may also be used for emergency ignition timing. For accurate ignition timing use a timing gauge that will set ignition in relation to piston travel.

By running engine at idling speed and attaching one wire to No. 1 cylinder spark plug terminal and grounding the other, the fast lighting gas tube illuminates the timing marks every time No. 1 cylinder fires. This will make timing mark appear to stand still. By turning the distributor the timing mark may be coincided with timing pointer. Check Automatic Spark advance by accelerating engine, mark should advance in smooth curve.

The gas lighting unit in this instrument may be replaced if damaged.



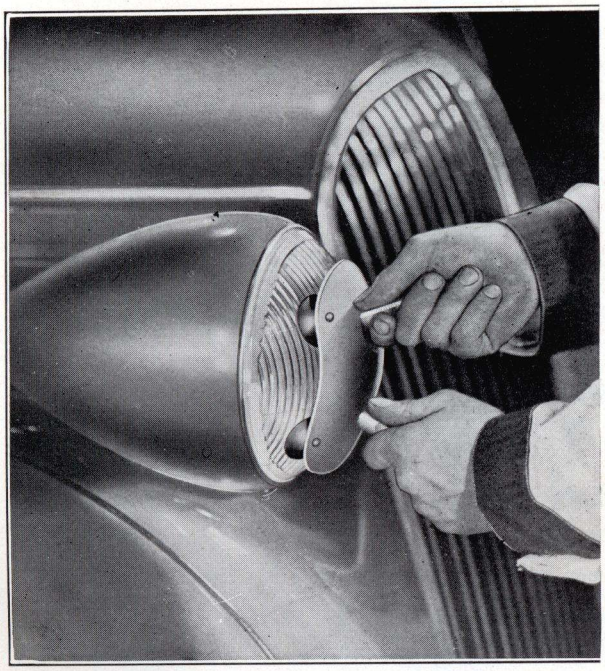
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



FEELER GAUGE

* **C-240** Special 3″ Gauge contains .0015, .002, .003, .004, .005, .006, .007, .008, .009, .010, .015, .018 and .025 Blades . . **$1.25**

Feeler gauges are a very necessary part of any service department, and must be used to make the proper factory specified clearance adjustments. Feeler gauges should be checked for size at regular intervals according to the amount of service required of them.



Patented

HEADLIGHT LENS TOOL

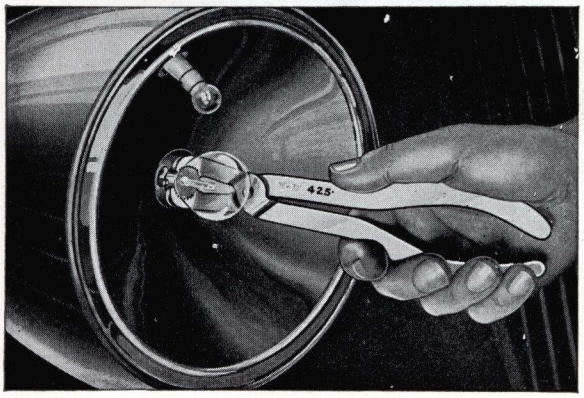
* **C-439** For All Doorless Type Headlights . . **$0.50**

Speed and ease in removing the glass lens from doorless type headlights is made possible through the use of this tool.

The four live rubber vacuum cups may be securely attached to the smooth outside surface of the glass lens. (The grooves are on the inside surface of the lens.) The solid steel shield of the tool provides a rigid base while ample leverage can be applied through the knurled handles to remove even the tightest lens.

One tool fits all various sizes and curves of this type lens. Packed in neat illustrated and printed carton giving complete operating instructions.

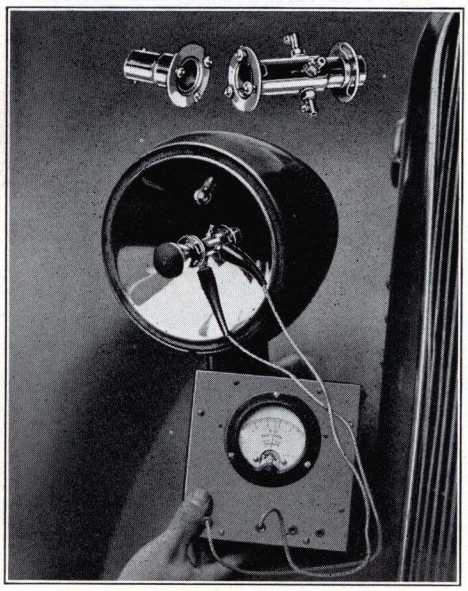
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



HEADLIGHT BULB PLIERS

* C-432 For All Models **$0.50**

The prefocused type of headlight bulb fits very snugly into its socket. These pliers grip the base of the bulb and allow it to be firmly held for removal or installation without any danger of the bulb glass being broken through too much pressure. This will prevent scratched Reflectors and seriously cut fingers. Notice the offset to clear headlight bulb glass. Insist on your service department using these pliers and avoid damage to parts.



HEADLIGHT VOLTAGE CHECKING SOCKET

* C-490 For All Models **$2.75**

Safe night driving depends greatly upon adequate lighting. Good lights depend upon the proper voltage reaching the head-lamp bulb.

Find defective bulbs and corroded sockets with this special socket which checks headlight voltage with lights burning. Refer to your Service Bulletins for correct voltage readings. Voltmeter not supplied.

IGNITION TIMING GAUGE

Also Used for Timing Valves

For Use in Timing Plug Opening Only

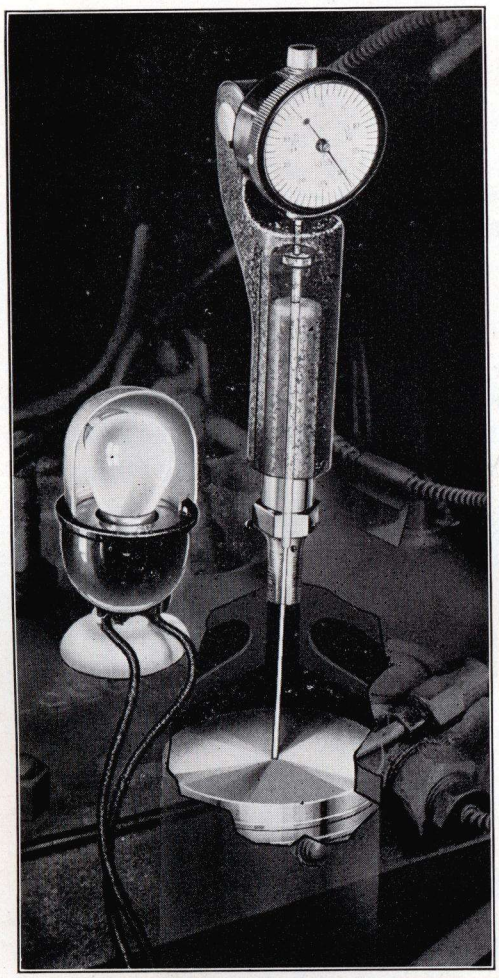
C-435 Complete for All Models **$14.50**

Ignition timing will greatly affect gasoline mileage and overall engine performance. Factory engineers specify engine timing in thousandths of an inch, evidence enough that each 1/1000 of an inch means a change in engine efficiency. Measure the location of the piston with this gauge and set engine ignition exactly in accordance with factory specifications as shown in your shop manual.

Damaged instruments repaired by our Service Department. See page 30 for parts used with dial indicator for checking alignment of various parts.

Ruggedly Constructed for Severe Service

Here is an instrument that has taken the eye of most mechanics — it is accurate — dependable — easy to operate and unusually rugged. Notice the telescoping head in the phantom illustration at the left. When the piston comes up, the contact rod raises to its maximum height, with the telescoping head absorbing the remaining piston travel.



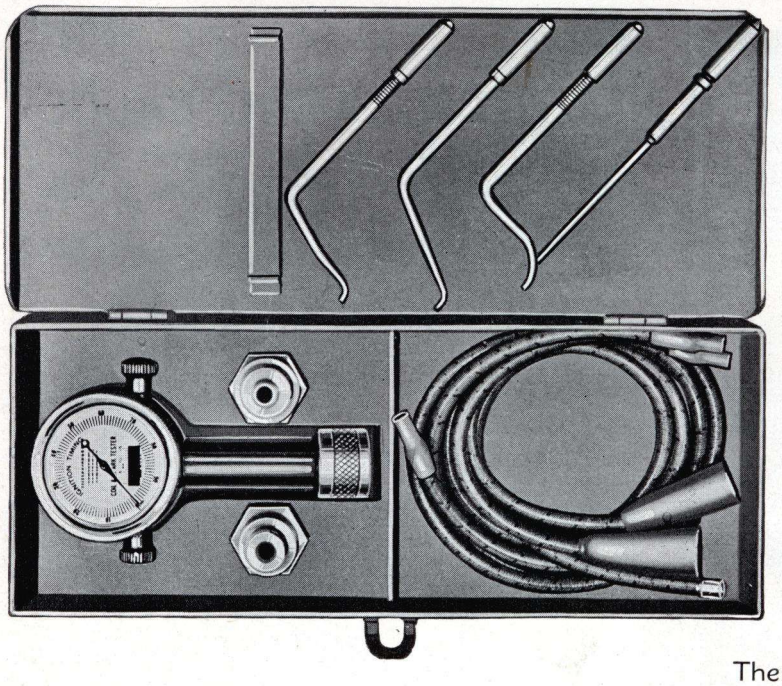
HOW TO USE IT!

1. Consult Factory Shop Manual for Timing data.
2. Wet vacuum cup of light and attach in convenient position. Remove distributor cap and attach one Clip to distributor point terminal. Clip other wire to live terminal of starter switch.
3. Remove timing plug from cylinder head. Be sure small hole is free of carbon.
4. Install threaded part of tool in timing plug opening. Assemble timing rod in this part. Rod should drop free under its own weight.
5. Assemble gauge head. Push down as far as possible.
6. Put car in high gear and roll forward until piston under gauge comes up on compression stroke. Small hole in threaded part will allow escape of compression.
7. Watch dial — Set at zero when dial indicator has reached maximum travel; remainder of movement will be automatically taken up by telescoping of gauge head on threaded body.
8. As soon as indicator hand begins to fall back, top dead center has just been passed. Roll car forward until correct reading is obtained, as specified in factory shop manual.
9. Loosen clamp bolt and rotate distributor body until breaker points just start to open. When the points are closed the light will be on, and as soon as the points open the light will go off. Press distributor cam lightly against the direction of rotation so as to remove all backlash. Lock distributor.

Spark Plug Adapters NOT Available

This gauge is Only for use on engines equipped with timing plug openings in cylinder head. All Chrysler Motors Products are equipped with this opening. CM-150 Timing Indicator with spark plug opening adapters still available.

MILLER TOOL & MFG. CO. AUTO TOOLS DETROIT, MICHIGAN



IGNITION TIMING INDICATOR

* **CM-150** For All Plymouth, Dodge, DeSoto and Chryslers **$19.50**

Maximum engine performance and smoothness of operation can ONLY be obtained when the ignition and valves are timed exactly in the correct relation to the piston.

Statistics show that 90% of all engine ills are directly traceable to ignition, compression, or timing, therefore, the CM-150 timing indicator is one of the most essential pieces of equipment in any service department.

The housing of the indicator is made of bakelite and is properly insulated throughout. The scale of the gauge is calibrated in one-thousandths of an inch, and the spark gap is graduated in millimeters.

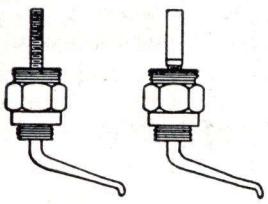


FIG. 1

FIG. 2

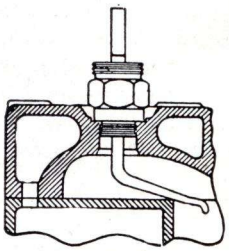


FIG. 3

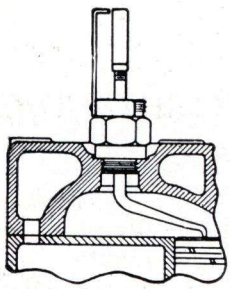


FIG. 4

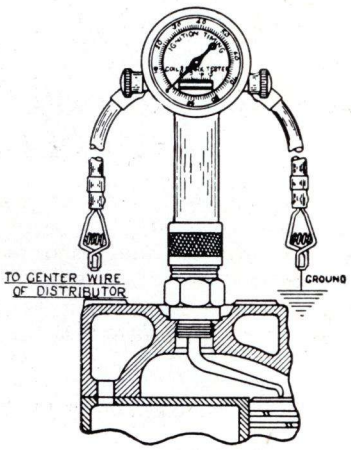


FIG. 5

Can be used through the timing plug hole or through spark plug opening.

Fig. 1. Rod installed in spark plug adapter.

Fig. 2. Adjusting nut installed on rod.

Fig. 3. Rod and adapter installed in spark plug opening.

Fig. 4. Setting rod adjusting nut with height gauge when piston is at top of stroke.

Fig. 5. Indicator ready for checking ignition.

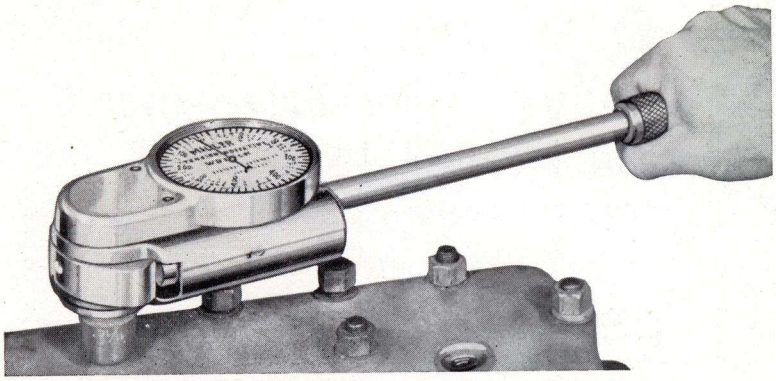
CHECKING IGNITION TIMING

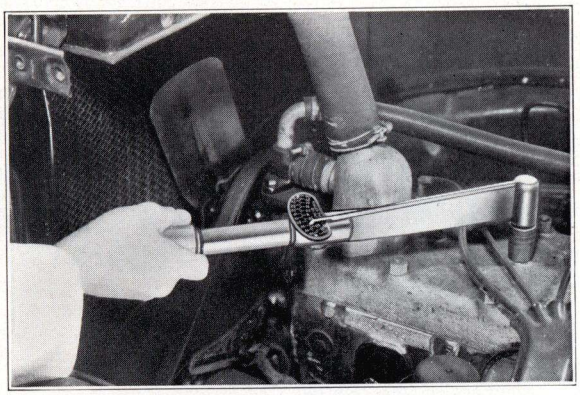
Install CM-150 Timing Indicator as illustrated at the left. Consult timing chart for proper timing data. (COMPLETE TIMING DATA AND DETAIL INSTRUCTIONS PACKED WITH EVERY GAUGE.) If timing occurs .030 before top dead center, locate top dead center on the compression stroke of piston. Move dial of indicator to zero, and then to left thirty lines. Reverse engine by using fan until hand passes the zero point about .025". Crank engine by hand bringing piston up slowly and stop at zero. This takes up all backlash. Turn distributor until spark fires in spark gap. Lock distributor in place.

Damaged Indicators Repaired

Our Service Department can save you money by expertly repairing your damaged instruments.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN





TENSION INDICATING WRENCHES

*C-485 Double acting dial gauge type **$17.50**

The scale of this wrench is calibrated to large easily read units which can be quickly transposed into inch or foot pounds if necessary. Multiply reading by 4.2 to obtain inch pounds and .35 to obtain foot pounds.

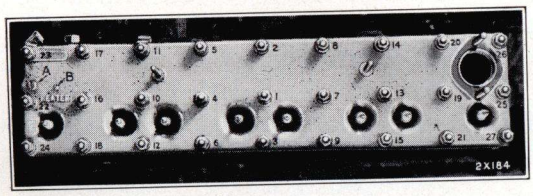
*C-524 Double acting, Beam type **$9.75**

This wrench has no moving parts, accurately measuring torque by deflection of the tapered spring steel beam. The scale is calibrated in foot pounds and is easily read even with limited light. The small head, which is only slightly larger than a standard socket wrench, allows this wrench to be used in tight corners.

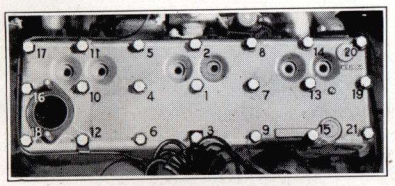
The Use of These Wrenches Helps to MAINTAIN COMPRESSION and PEAK PERFORMANCE

Stop compression loss and blown head gaskets — by accurately tightening cylinder heads. These wrenches can be used to advantage at other points where uniform tension is required. There is no guess work when using these special tension indicating wrenches. Every nut can be tightened to a uniform tension eliminating distortion of parts, gasket failure and loss of power. Fits mechanic's standard ½" square socket wrench sets.

Correct Order in Which to Tighten Cylinder Head Nuts



8 Cylinder Engine



6 Cylinder Engine

CORRECT METHOD OF TIGHTENING CYLINDER HEADS

Install gasket carefully, being sure it is not damaged when sliding it over cylinder head studs. Tighten cylinder head nuts evenly, but not too tight, with speed wrench, in order shown on diagram. Finish tightening nuts with tension wrench to tension indicated in table which accompanies each wrench.

Cast Iron Heads

The final tightening should be done after the engine has been run and become thoroughly warmed. The cylinder head nuts will then be found to require further tightening to reach the recommended tension.

Aluminum Heads

Run engine until thoroughly warmed, then shut it off and let cool. Tighten cylinder head nuts to final recommended tension when engine has cooled.

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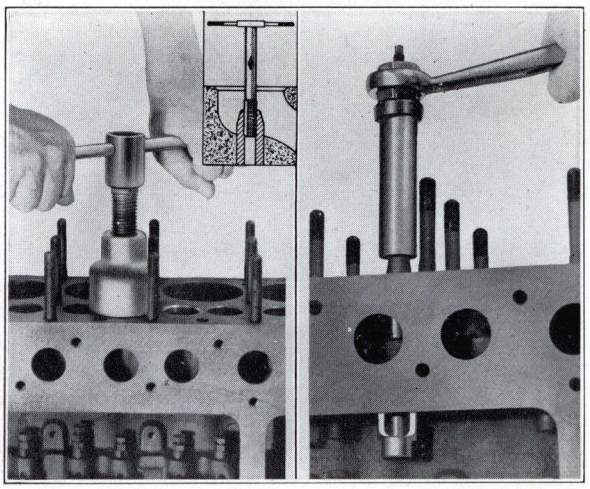


Tapping Valve Guide and Removing Guide

Installing Valve Guide

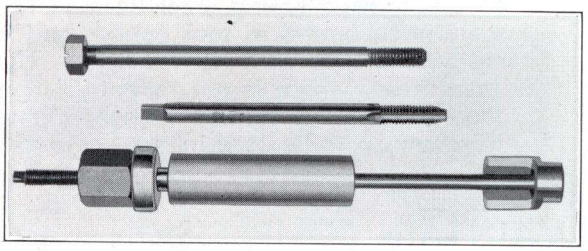
VALVE GUIDE REMOVING and INSTALLING TOOL

***CM-83** Complete with special tap and installing parts **$8.25**

For all models using 5/16" and 11/32" I. D. valve guides.

On many of the late model cars the valve guides cannot be removed satisfactorily with the old style straight puller screw and nut. By tapping a thread in the top of the valve guide with a special tap supplied with this tool as illustrated, the special puller screw can be used. A small rag tucked carefully around the bottom of the valve guide will prevent the cuttings from the tap entering the engine.

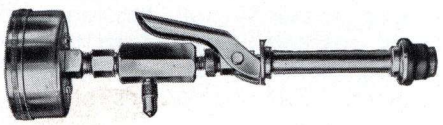
A new valve guide is installed with this tool as shown at the left. To locate the new guide in the proper position, measure the location of an original guide and scribe a mark on the installing spacer sleeve which can be aligned with the top of the block.



ORIGINAL CM-83 TOOLS MAY BE MODERNIZED WITH THIS KIT

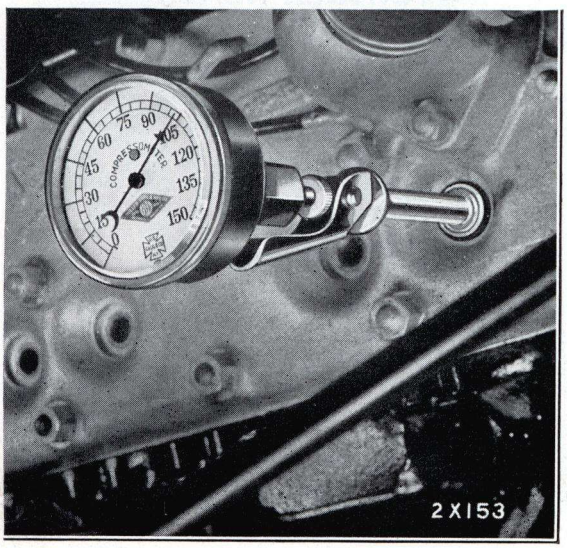
CM-83-M Tap, puller screw and installing parts as illustrated **$4.95**

Owners of the original CM-83 tools can equip them with the latest improvements by ordering this special modernizing kit and make their present equipment adaptable to the latest type valve guides.



CYLINDER COMPRESSION INDICATOR

*** CM-45** Latest type for All Models **$5.50**
See Tool Parts List for spark plug adapter bushing, part numbers and prices.

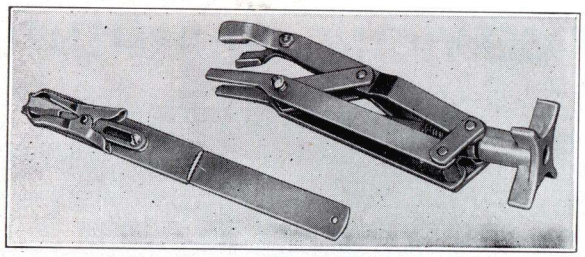


This instrument is the very latest and most efficient design. It is equipped with three different sizes of rubber bushings which are quickly and easily expanded into the spark plug hole by using the fast operating cam clamp.

It is indispensable when selling major engine repairs, valve grind jobs, etc. The indicating hand holds the pressure until released by by-pass valve located on side of instrument. This greatly facilitates accurate comparison of various cylinder compression readings.

Fast service at nominal cost on damaged indicators by our service department.

MILLER TOOL & MFG. CO. AUTO TOOLS DETROIT, MICHIGAN

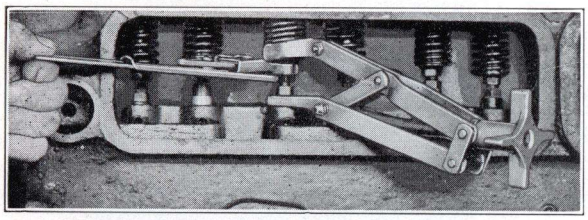


SHORT, STRAIGHT LIFT VALVE LIFTER

VALVE LOCK INSTALLING TOOL

* **C-482** Short Valve Lifter for All Late Models **$1.85**

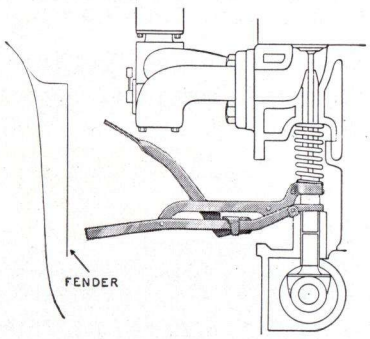
* **C-486** Improved Valve Lock Installing Tool For All Late Models **$1.95**



Here is the combination of valve tools that satisfactorily services all late models where limited space makes others useless. The lifting screw of the lifter has a fast acting thread lifting the valve spring straight up with only a turn or two of the large wheel nut.

This valve lock tool is unusually easy to load and provides maximum clearance. The lower guide plate is retractable allowing the valve lock jaws to spread over the tappet and release the complete tool even when the valve stem and tappet are touching.

Notice the vertical lift of this valve lifter. Raises full 2½". The valve lock tool does not interfere with quick, full release of valve spring.

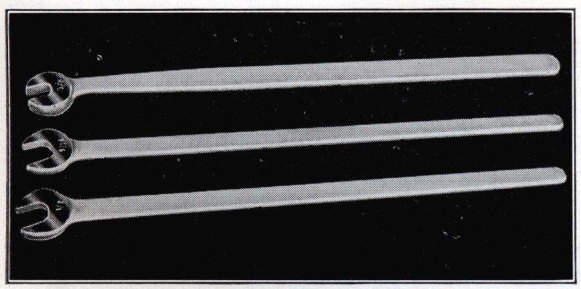


Straight Lever Type

VALVE SPRING COMPRESSOR

* **C-357** Straight Lever Hand Type **$1.70**

On many models this strong, serviceable hand type valve spring compressor is preferred.



TAPPET ADJUSTING WRENCHES

* **DD-29** Size ½" Thin Head, each **$0.75**

* **DD-34** Size 9/16" Thin Head, each **$0.75**

* **C-434** Size 3/8" Thick Head, each **$0.75**

* **C-508** Size 7/16" Thick Head, each **$0.75**

The pear shaped heads and their long handles make them favorites among mechanics. The DD-29 and DD-34 wrenches have thin heads as these are used in sets of three. The C-434 wrench has a thick head to hold it in position when adjusting the self locking type of tappet which requires only two wrenches when adjusting.

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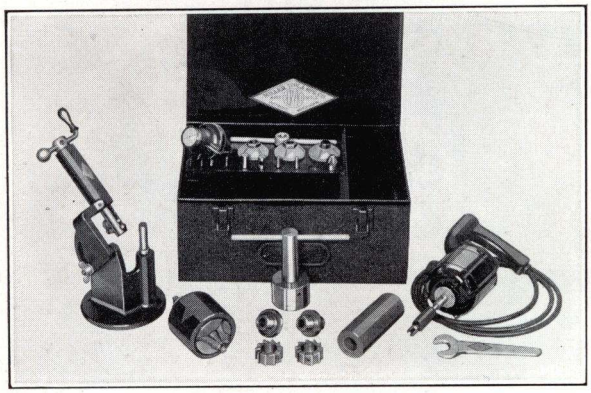


Specify Voltage When Ordering

HARDENED INSERT VALVE SEAT SERVICING EQUIPMENT

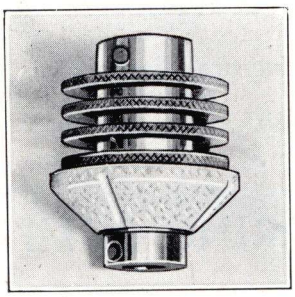
C-372 Grinding Equipment ONLY, complete with Electric Drive for all Chrysler Motors products **$75.00**

C-386 Grinding Equipment, complete with Electric Drive and parts for installing .010" oversize inserts for All Chrysler products . . . (illustrated at left) **$93.50**

These sets have been carefully made up so that your service department may select only that equipment which is required. The C-386 set is the most popular and includes all of the equipment for grinding both the hardened exhaust and soft intake valve seats for all Chrysler Motors products as well as the cutters and other necessary parts for installing .010" oversize inserts when it becomes necessary to replace the original insert. It also includes a hardened insert puller so that the damaged seat may be quickly and easily removed without damaging the block.

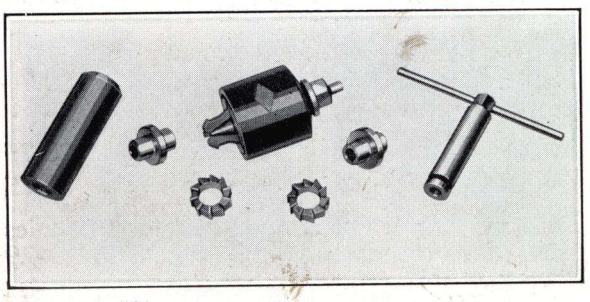
SERVICE PARTS

All parts are available, see Tool Parts List for numbers and prices. Keep parts clean to obtain maximum service.



Air Cooled Stone Holders

Air Cooled Stone Holders with hardened Steel Bushing are supplied with the Valve Seat Servicing Equipment Sets. They may also be ordered separately.

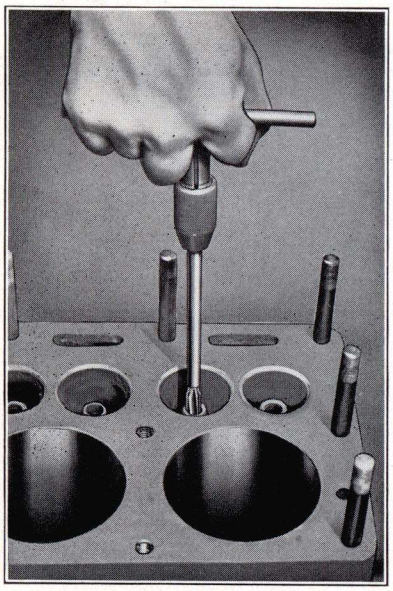


.010" OVERSIZE INSERT INSTALLING EQUIPMENT

C-387 Equipment for use with above sets on All Chrysler Motors Products **$22.75**

Dealers who have purchased the C-372 Grinding Equipment only, or who have the air driven equipment, formerly supplied by the Chrysler Motors Parts Corporation can purchase this set of tools for installing .010" oversize inserts. The special puller removes worn out or damaged inserts very effectively, without any danger of injuring the engine block. The cutters and peening tools all are used in conjunction with the Miller expanding pilot to accurately align the new valve insert with the valve guide. Cutters allow a press fit for the new insert and the peening tools securely peen it into place. Complete operating instructions supplied with equipment.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



VALVE GUIDE EXPANSION REAMERS

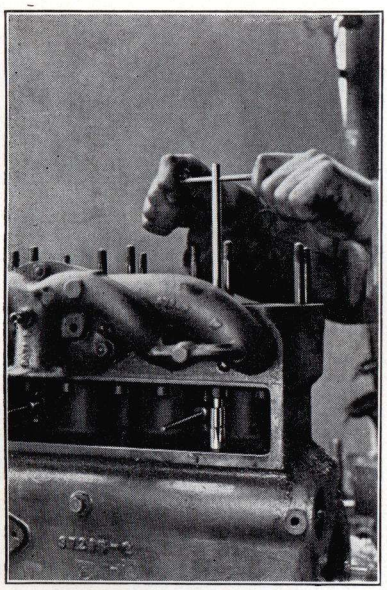
*** C-249** ●
Size .343. For All 1930-38 Dodge Sixes, All Plymouth Sixes, All DeSotos, All Chryslers except 58, 50, 52 and Imperial 80's. Also 6 Cylinder Truck Engines up to 2-Ton **$2.85**

*** CM-38** ●
Size .375. For All Plymouth Fours, All Dodge Fours, Chrysler 58, 50, 52 and Maxwell **$3.00**

*** CM-38-1** ●
Size .370. For Dodge Victory, Standard, Senior, 1929 DA six, 2 and 3 ton trucks with 6 cylinder engines and Chrysler Imperial 80's. **$3.00**

Reaming of the valve guides to the exact clearance with the valve stem is a very important operation to the quiet and economical performance of any engine, and cannot be accomplished without the proper reamer equipment.

These reamers are of the expansion type allowing both the intake and exhaust valves to be reamed with the same reamer. Solid reamers may be supplied in individual sizes, specify decimal size when ordering. Use carefully.



VALVE TAPPET REAMER SET

C-265 ●
For all 1933 to 1938 Models. Set contains .003", .008", .030" and .060" oversize reamers with .343" pilot stem. Complete **$8.50**

To eliminate noisy valve tappets it is often necessary to install oversize tappets. To do this the proper line reaming equipment is absolutely essential.

The set listed above includes specially designed cutters to ream the engine block for their respective oversize tappets. The reamer is installed as illustrated in the old hole, then the pilot stem which also acts as a turning handle, is assembled through the valve guide until it engages the reamer. This method insures the new hole being perfectly aligned with the valve guide.

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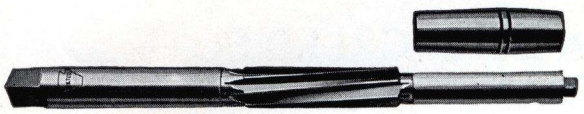
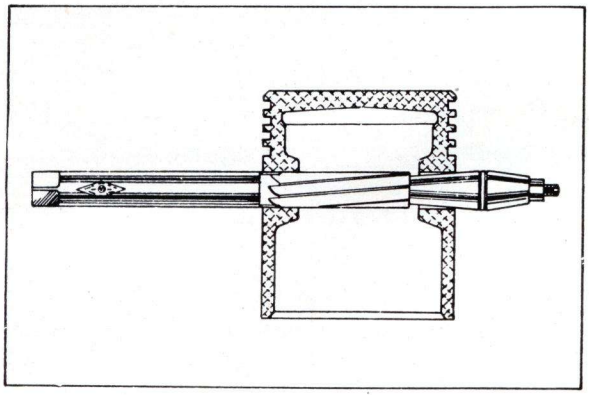


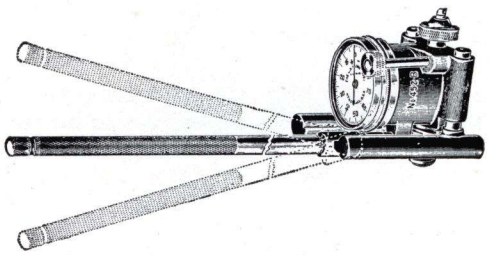


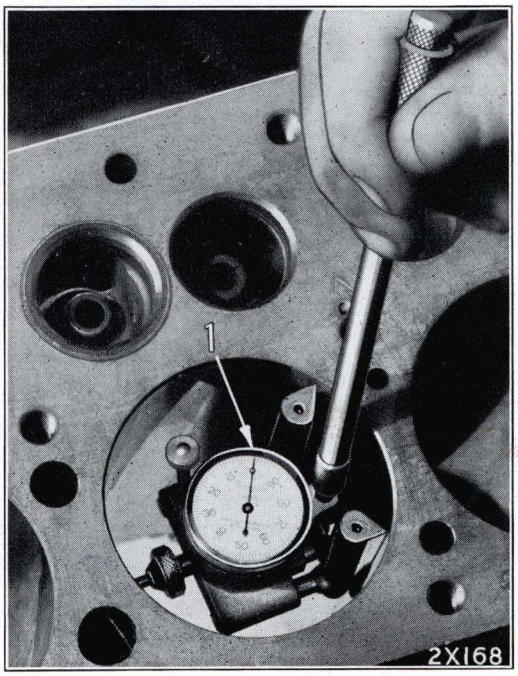
SPECIAL FLOATING PILOT SPIRAL EXPANSION PISTON PIN LINE REAMER

* **DD-82-2** Piston Pin Line Reamer, Size .859" **$8.35**

All Sizes Available.

These reamers are all of the spiral fluted, expansion type with a special "slip or floating" pilot which makes them the ideal equipment for the particular piston pin fitting specialist. The pilot is tapered and floats on the reamer so that it aligns the cutting edge with the old hole, even when reaming an oversize bushing or piston. When three or more of these reamers are ordered at one time, they will be shipped in a neat hardwood case.





CYLINDER BORE TEST INDICATOR

* **CM-119** For All Models **$14.75**

With the ever increasing demand for cylinder bore reconditioning comes a necessity to check the cylinder bore before and after reconditioning.

The CM-119 Test Indicator does not require the use of master test rings, the exact size of the cylinder bore being measured with a pair of standard micrometers across the two contact points of the indicator.

It is adaptable to all cylinder bores from 2½" to 6" in diameter and is equipped with a combination rigid and toggle handle. The hardened steel sled acts only as a guide, the cylinder bore being measured by the two contact points of the indicator which may be locked in position before removing from the cylinder.

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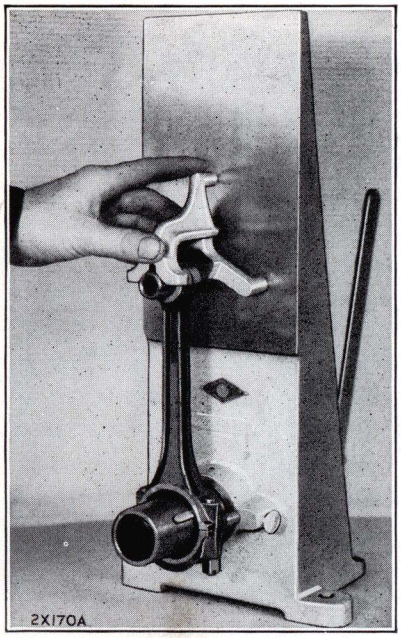
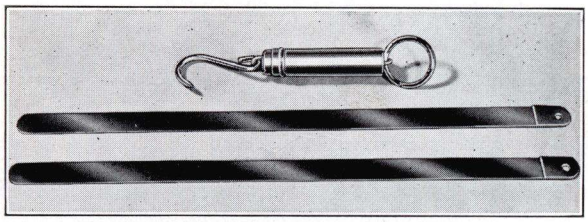


CONNECTING ROD and PISTON ALIGNING FIXTURE

* **DD-146-B** For All Models **$35.00**

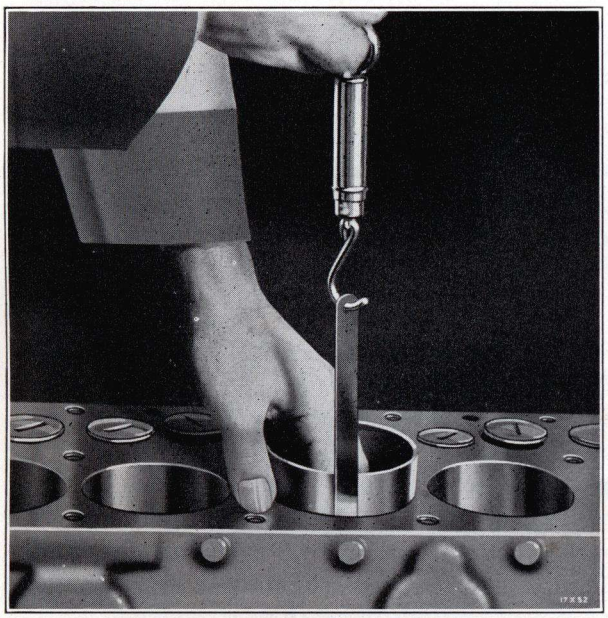
Accurate engine reconditioning demands careful aligning of connecting rods. This special, self adjusting fixture quickly indicates both twist and bend.

Two sizes of three point aligning gauges fit various lengths of piston pins. Rod is checked both ways against face plate as illustrated. The lower expanding arbor is instantly adjustable from 1⅞" to 2½".



PISTON FITTING GAUGE and SCALE

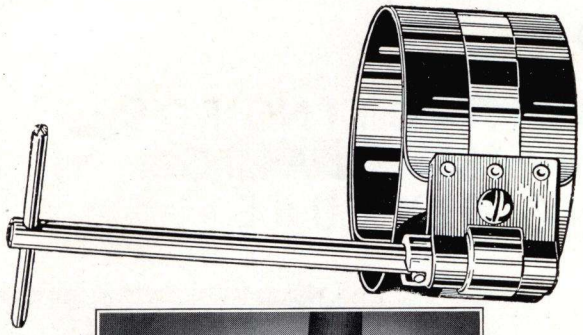
* **C-394** For All Models **$1.25**



This tension scale and piston fitting feeler stock greatly increases the accuracy of fitting pistons. It eliminates the human element when "feeling" the pull of the thickness gauge when measuring the clearance of the piston in the cylinder bore. The tension scale is of high quality and may be readjusted, should it be necessary. .002" and .003" thickness gauge stock supplied, other sizes at slight additional cost.

For specifications regarding location, number of pounds pull required and size of feeler gauge, consult your factory Shop Manual or Service Bulletins.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN

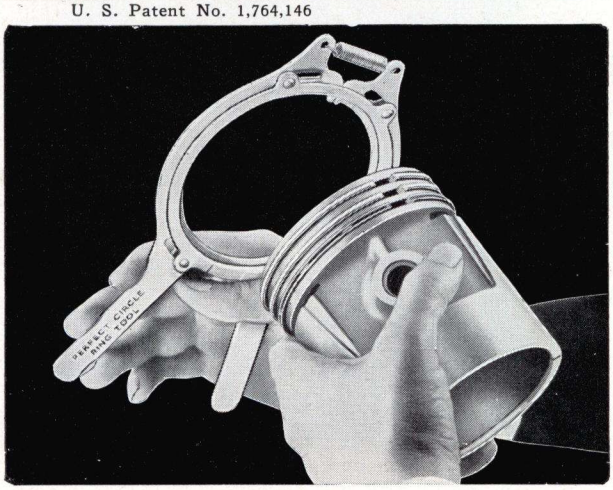


UNIVERSAL PISTON RING COMPRESSOR

* **C-385** For All Models **$0.95**

This very necessary and efficient piston ring compressor fits all sizes of pistons from 2½" to 5" diameter. It should always be used when installing multiple piece piston rings and even with plain rings its use is advisable to eliminate breakage and distortion. When using this compressor be sure rings are fully entered in ring grooves of piston.

U. S. Patent No. 1,764,146



PISTON RING INSTALLING and REMOVING TOOLS

* **C-389** Set of 10 Tools (Specify sizes) . . **$12.95**

* **C-390** Set of 5 Tools (Specify sizes) **$ 6.95**

Single Tools (Specify size) each . **$ 1.45**

Available in the following sizes:

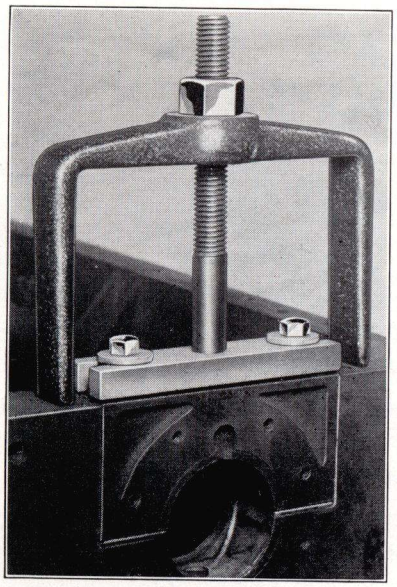
***C-518** $2\frac{11}{16}$	***C-466** $3\frac{1}{16}$	***C-261** $3\frac{3}{8}$
***C-519** $2\frac{3}{4}$	***C-259** $3\frac{1}{8}$	***C-469** $3\frac{7}{16}$
***C-264** $2\frac{7}{8}$	***C-467** $3\frac{3}{16}$	***C-262** $3\frac{1}{2}$
***C-520** $2\frac{15}{16}$	***C-260** $3\frac{1}{4}$	***C-263** $3\frac{5}{8}$
***C-266** 3	***C-468** $3\frac{5}{16}$	***C-521** $3\frac{7}{8}$

Dynamometer tests have given such definite proof of the bad effect of ring distortion during installation that the Perfect Circle Ring Tool was developed to make possible the installation of piston rings without distortion.

The efficient performance of piston rings depends in a large measure on correct shape and radial wall pressure characteristics.

This Ring Tool completely eliminates the human element in opening or expanding a piston ring for installation on a piston. When expanded with this tool, rings are confined to a correct circular form in a metal collar, and no permanent distortion is possible. Actual breakage is prevented and fracturing of thin wall sections of oil rings is avoided.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN

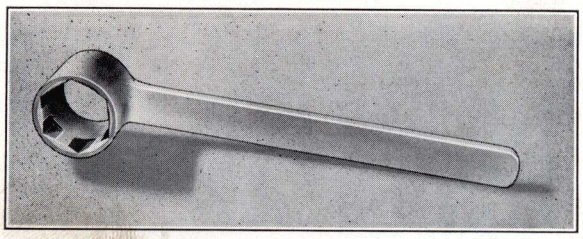


MAIN BEARING CAP PULLER

C-305 Main Bearing Cap Puller services All Eight Cylinder Models **$3.50**

On cars where the main bearing cap is sealed in position it is very hard to remove the cap for inspection or repair of the bearing. Prying the cap off with a pinch bar against the crankshaft is very poor practice. It is very apt to spring the crankshaft disturbing the whole balance and smoothness of the engine.

The C-305 Main Bearing Cap Puller bolts onto the main bearing cap as illustrated at the left. The yoke spans the cap assuring a straight direct pull on the puller screw, to break the bearing seal, and prevents damage to either the bearing or the crankshaft.

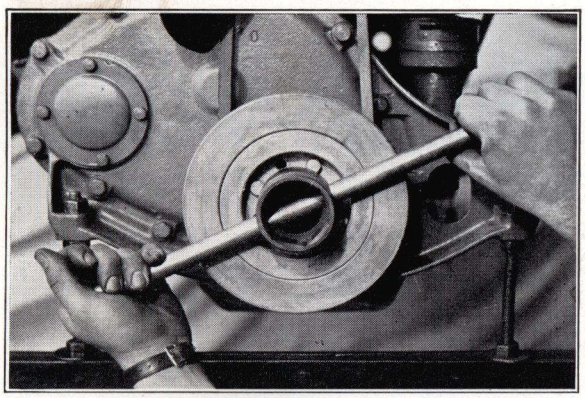


CRANKSHAFT NUT WRENCHES

C-355-2 Size $1\frac{13}{16}$" hex. long type with solid handle. For 1933 to 1938 models using impulse neutralizer except Chrysler C18, C19, C20, DeSoto S5 and Dodge D8. (For these models use wrench C-365.) **$1.50**

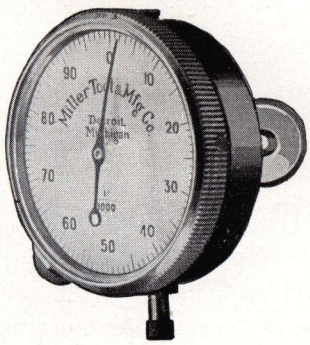
C-355-16 Size $1\frac{13}{16}$" hex. short type with solid handle. For 1933 to 1938 passenger cars and trucks without impulse neutralizers **$1.50**

In many cases the use of these specially designed wrenches allow the impulse neutralizer or fan pulley to be removed without removing the radiator.



C-365 Size $1\frac{13}{16}$" hex. deep socket type with sliding T handle. For Chrysler C18, C19, C20, DeSoto S5 and Dodge D8 . . . . . **$2.50**

The wall of this wrench is machined especially thin to allow the starting crank jaw nut to be removed without taking the impulse neutralizer apart. It is made of high carbon steel and heat treated for strength. This wrench is used with the radiator removed.



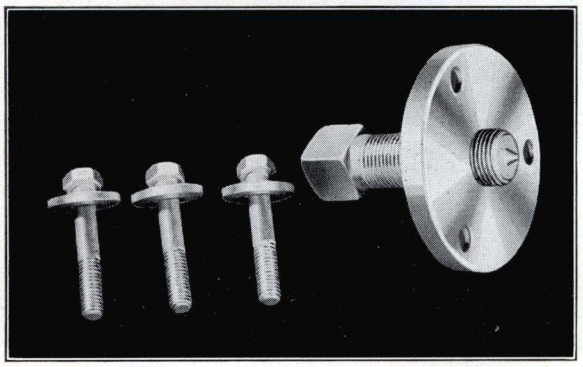
MILLER DIAL INDICATOR

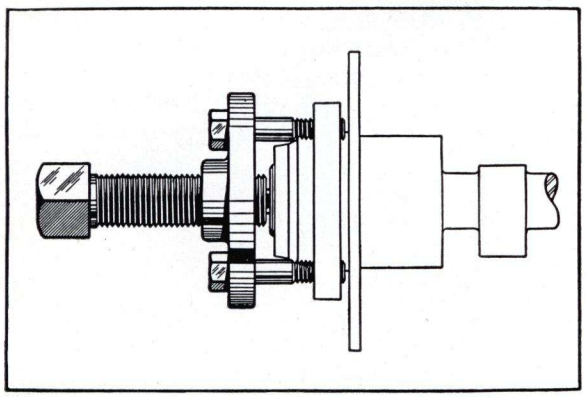
* **C-396** For All Models **$9.00**

See page 28 for Dial in use.

This indicator made especially for Miller Tool and Manufacturing Company, is rugged and dependable. The face is clearly and accurately calibrated in $\frac{1}{1000}$" making it easy to check the end play of a rear axle shaft, gear back lash in differential, bent shafts, etc. A complete repair department is maintained for servicing these instruments.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN



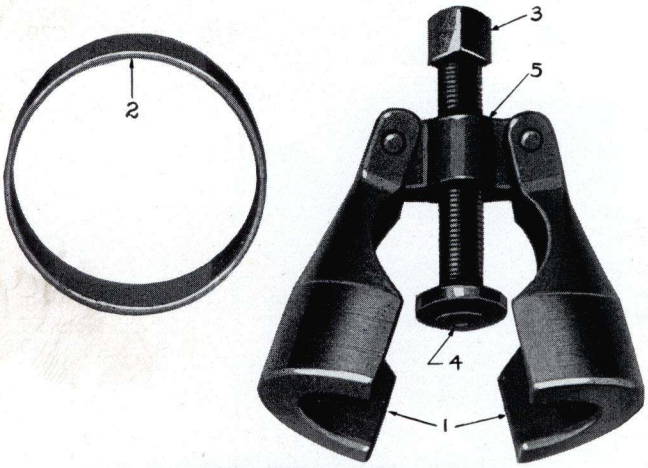


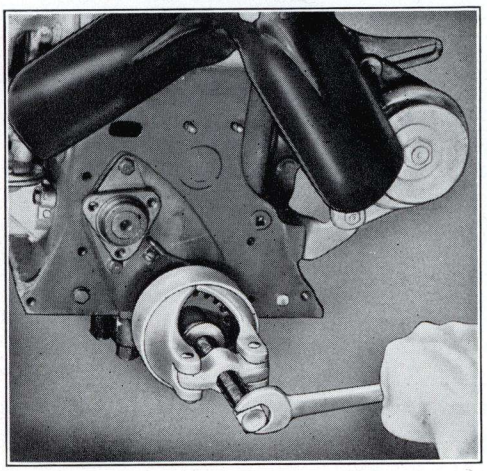
CAMSHAFT SPROCKET HUB PULLER

C-407 For 1933 to 1938 Models **$1.95**

On the late model cars the camshaft sprocket is bolted to a steel hub which is securely pressed onto the end of the camshaft. This hub also holds the camshaft thrust plate on the camshaft.

Whenever it is necessary to remove either of these parts be sure to use this puller — it will save time and parts. Take the camshaft out of the engine and install the hub in an arbor press, do not drive the hub on the camshaft while in the engine. The full thrust of the driving blows is taken on the oil pump teeth and is sure to result in serious damage to the engine.





CRANKSHAFT AND CAMSHAFT GEAR PULLERS

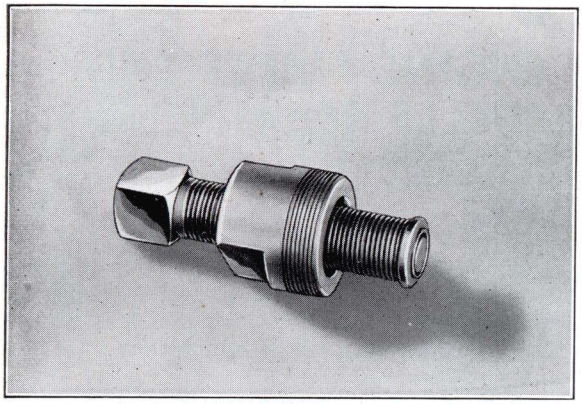
C-27 Crankshaft Gear Puller for All Passenger Cars, and Trucks up to 2 ton capacity **$4.75**

DD-412 Camshaft Gear Puller for 2 and 3 Ton Models with gears having grooved type hubs **$4.75**

The clam jaws No. 1 fit around the hub of the sprocket. Ring No. 2 holds the jaws firmly in place. The button No. 4 protects the end of the shaft, positively assuring complete protection from damage to the shaft and sprocket when pressure is applied by screw No. 3.

The fiber camshaft gear on the large truck model engines is pressed securely in position. This tool fits the type of fiber gear having groove in steel hub.

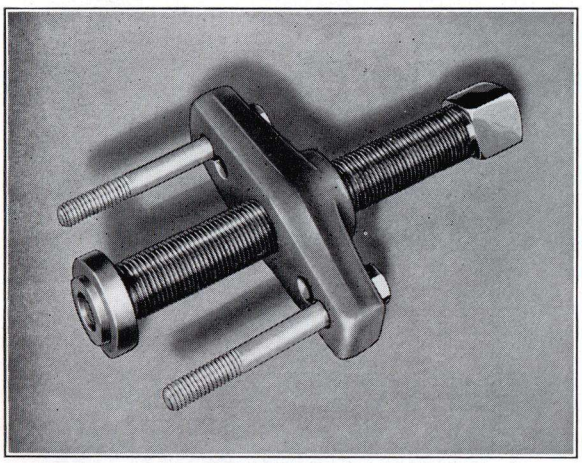
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



CAMSHAFT GEAR PULLER

DD-443 For 3 Ton Models with fiber gears having internally threaded hubs . . . **$2.50**

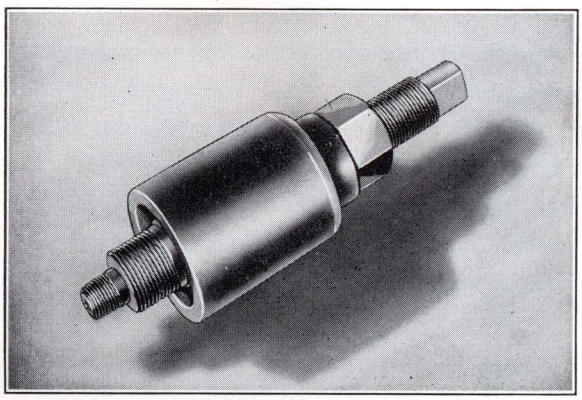
The later models using fiber camshaft gears require this type of puller to efficiently remove this important part. Be sure to use special installing tool when replacing gear.



CRANKSHAFT GEAR and FAN PULLEY PULLER

DD-440 For 2 and 3 Ton Trucks **$2.75**

Much time and effort can be saved through the use of this inexpensive yet rugged puller when servicing truck engines.



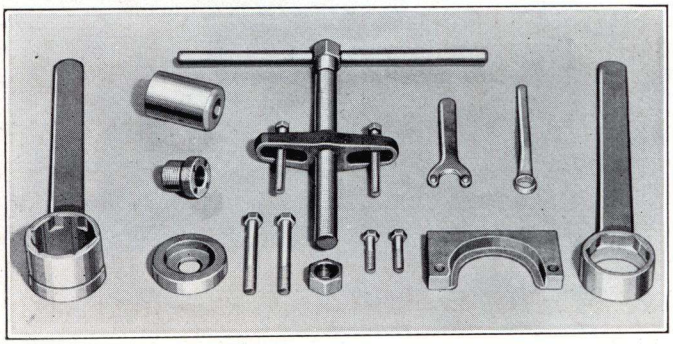
CAMSHAFT and CRANKSHAFT GEAR and CRANKSHAFT DRIVE PULLEY INSTALLING TOOLS

DD-439 For 2 and 3 Ton Models **$3.25**

It is very important to use this tool when installing a camshaft gear. Without it there is a possibility of driving the camshaft back and loosening the Welch plug located in the engine block at the rear end of camshaft.

Assembly of the crankshaft gears and fan drive pulley is greatly simplified through the use of this same installing tool. Every truck service repair department should have it.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



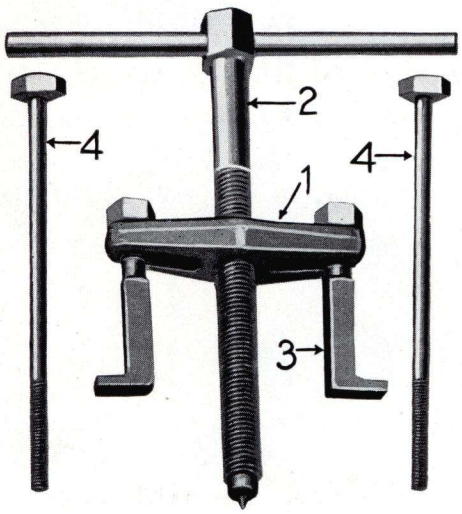
ENGINE FRONT END PULLER EQUIPMENT

C-355 For 1933 to 1938 Models . **$9.50**

The engines on the late model cars are very close to the radiator and in order to efficiently service the front end it is necessary to have this set of equipment.

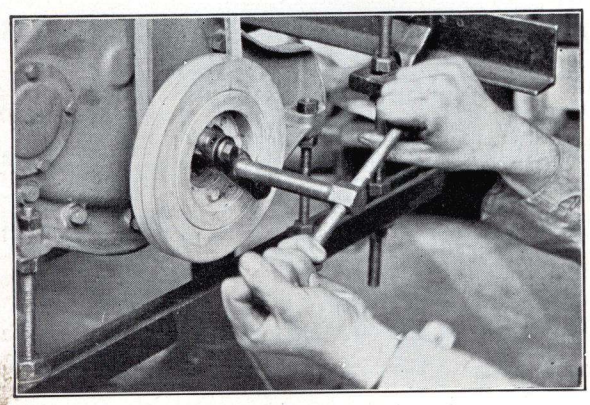
On some models several hours may be cut from the time allotted for front end service if this equipment is used. On others the impulse neutralizer may be removed and installed without removing the radiator.

This tool has a great variety of use, the puller may be adapted to many unusual gear and pulley pulling jobs.



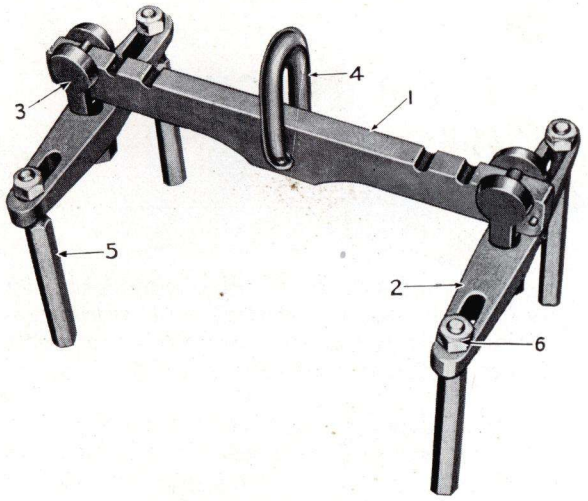
IMPULSE NEUTRALIZER, FAN PULLEY and CRANKSHAFT GEAR PULLER

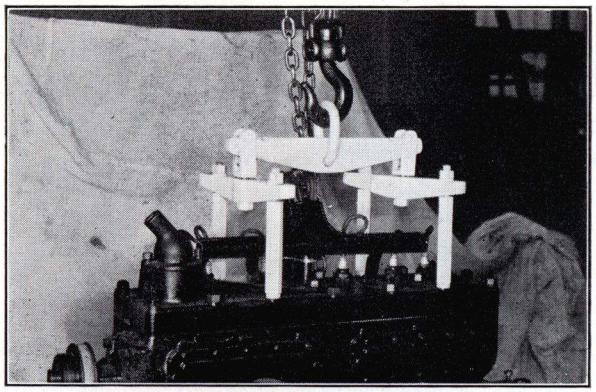
* **CM-57** For All Models **$2.50**



Many common place service operations may be performed with this simple inexpensive puller. Listed are only three of the most prevalent jobs it will do for you. Most shops need several of these standard puller sets to accommodate unusual but stubborn pulling jobs. Be sure your service department has at least one set.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN





ENGINE LIFTING FIXTURE

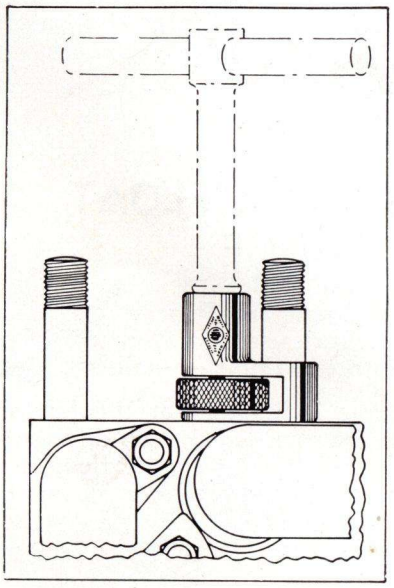
* **C-204** For All Models with stud and cap screw type cylinder heads **$16.00**

Complete with 3 sets of lifting adapters (4 to a set).

Removing engines from chassis demands safe dependable equipment that is flexible enough to be adapted to all the various engine and chassis designs.

These fixtures have been used by large and small dealers for years lifting complete engine assemblies safely and easily.

Equip your heavy repair department with at least one of these fixtures and save time in handling engine removals.



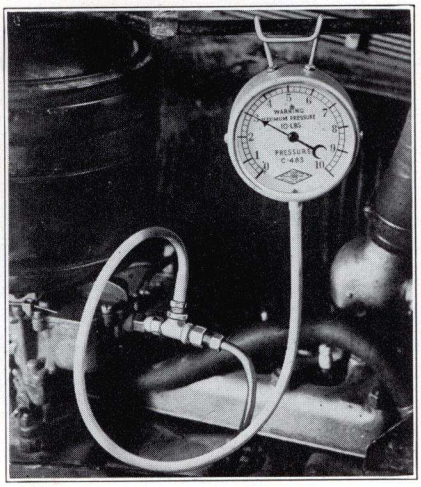
STUD REMOVER and INSTALLING TOOL

* **C-244** For All Models **$1.65**

When removing or installing cylinder head studs this tool is very essential. It will save considerable time which would be lost trying to do this work with some improvised method.

It may be used with any standard socket wrench set as illustrated. The Eccentric knurled roll firmly grips any stud from 3/8" to 5/8" diameter.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN

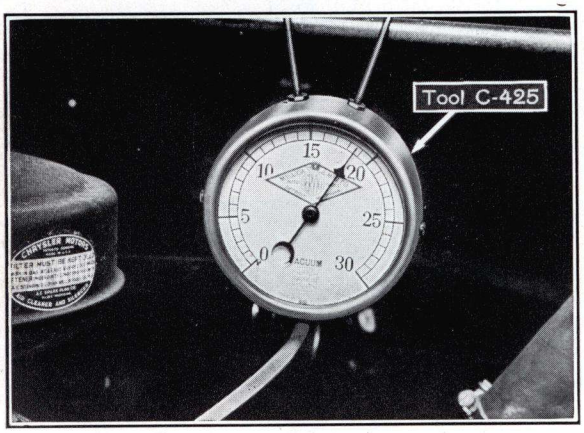


FUEL PUMP CHECKING GAUGE

* C-483 For All Models **$3.95**

An especially accurate and dependable low pressure gauge is required to check fuel pump pressures. This instrument is especially designed for this work. The 3½" diameter face is divided into only 10 pounds providing large accurate calibrations against which even a small variation of a single pound reading is easily checked. The hook allows the gauge to be conveniently hung on the radiator tie rod.

A special tee connection is supplied to connect the gauge in the fuel line between the fuel pump and carburetor. This connection is easily made at the side of the carburetor as illustrated. Your factory shop manuals specify the correct fuel pump pressure on each model.

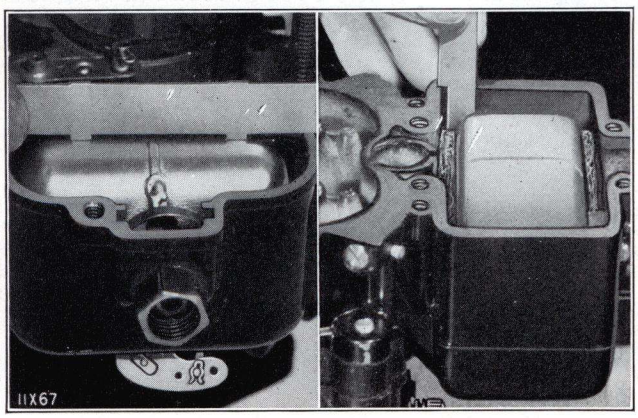


VACUUM METER

* C-425 Sensitive Model for Engine Tune Up Work **$3.50**

A sensitive vacuum meter used by a capable mechanic can correctly diagnose many engine conditions.

This meter is fitted with a hook for hanging it on the radiator tie rods — directly in front of operator. Easy to attach — tube fits windshield wiper hose. A sensitive vacuum instrument of this type must receive careful handling in order for it to retain its original accuracy — do not drop. Each instrument packed with 2 page illustrated instruction pamphlet.

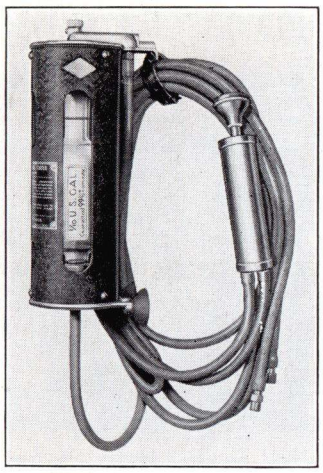


CARBURETOR FLOAT LEVEL GAUGE

* C-449 For Carter and Stromberg single float carburetors used on Plymouth, Dodge, De-Soto and Chrysler models **$0.30**

The double illustration at the left shows the float level being checked on two different types of carburetors. The height of the float is measured on the first type while on other models the actual fuel level is checked. The single notched end of the gauge is then used.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN



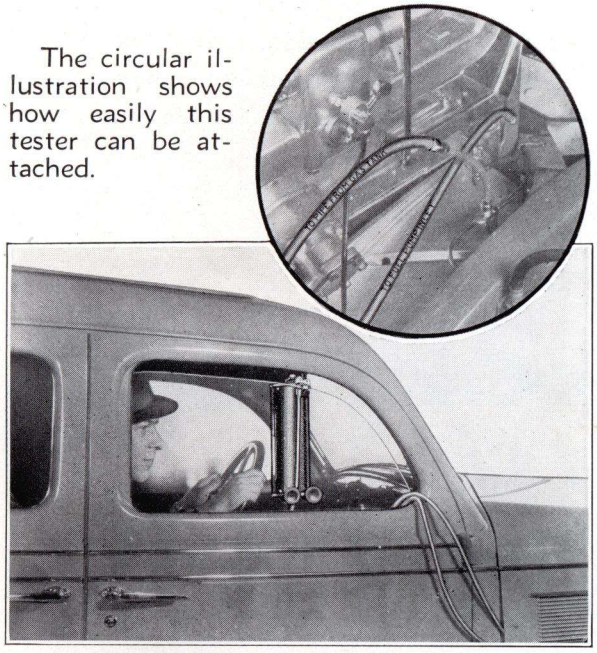
GASOLINE MILEAGE TESTER or "GASOMETER"

* **DD-425** Gasometer complete with Universal Fittings, Metal Pump, 99⅔% Accuracy Label and Instructions **$7.92**

Unsupported claims and vague explanations of excessive gasoline consumption have little effect on a dissatisfied owner. Prove to him conclusively the gasoline efficiency of his car by using this tester *that he can watch* during the test.

Use this tester to sell your skeptical new car prospect, it takes only two or three minutes to install — does not interfere with the normal fuel system. The 1/10 gallon measuring glass may be filled with the engine running. Use this equipment to back up your fuel economy statements and show your owners how to secure greater gasoline mileage.

The circular illustration shows how easily this tester can be attached.



YOUR PRESENT TESTER MAY BE RECONDITIONED

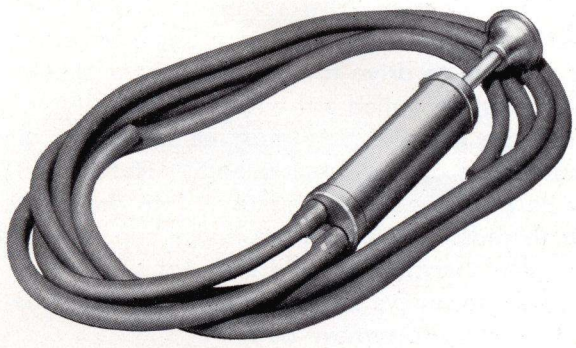
* **DD-425-R** Recondition Used Gasometer **$3.95**

Be sure your testers are in good condition — ready to supply convincing proof of actual gasoline mileage. Be sure to return damaged tester same day reconditioning is ordered. Return in same manner as returning part to factory. Pack carefully.

AVAILABLE IN IMPERIAL, U. S., AND METRIC

When other than regular U. S. gallon graduated testers are required be sure to specify type plainly on order.

* **DD-425-M** Modernizing Kit **$2.15**
Set of Hose and Metal Pump



ALL PARTS AVAILABLE

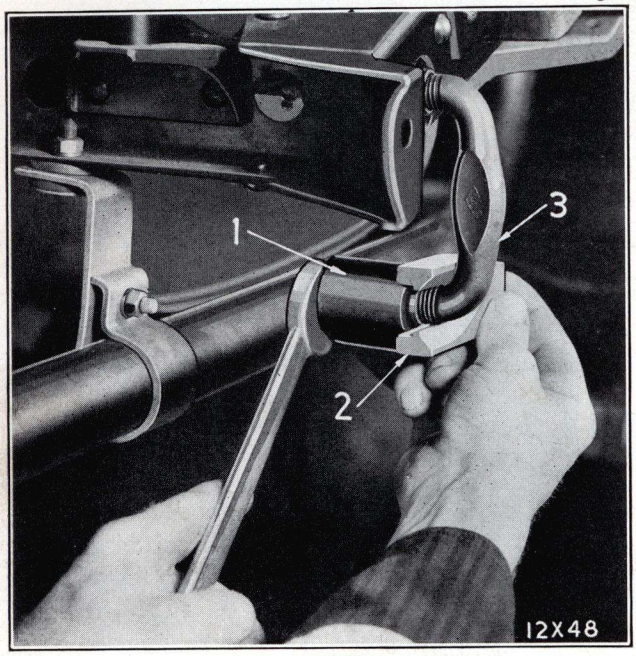
Dealers who have gasometers fitted with rubber priming bulbs may order the fast acting metal priming pumps separately. Complete list of tool part numbers will be found in back of book.

Check your gasometer now and order necessary repair parts or return complete tester for reconditioning.

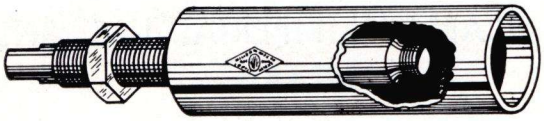
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN

SILENT-U-SHACKLE ADJUSTING GAUGE

C-329 For All Plymouth, Dodge, DeSoto and Chrysler cars using this type of shackle **$1.75**

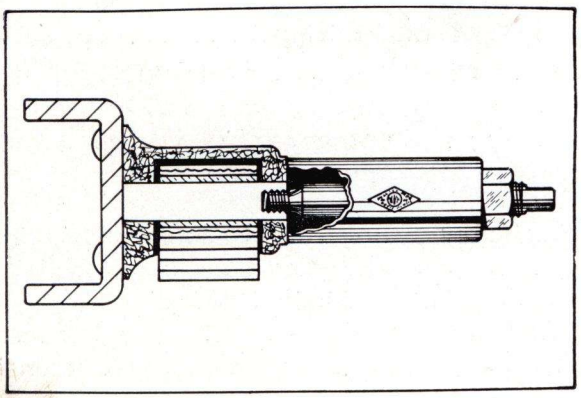


When assembling this type of shackle into the spring eye or frame hanger holes, this gauge must be installed as illustrated between the U-bolt and the spring eye or hanger. Screw in each bushing being sure the gauge is in place until the inside surface of the hex is flush with the surface of the hanger or spring eye. It will be necessary to use considerable force to do this in the spring eye. This assures the proper adjustment of this shackle for easy, trouble free riding.



SPRING SHACKLE BOLT PULLER

DD-431 For 1½ and 2 Ton Trucks **$1.75**

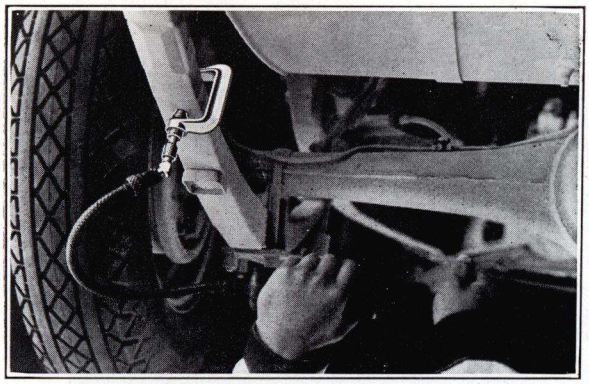


When it is necessary to remove the front shackle bolt from the rear spring on the one and one-half ton trucks this tool is indispensable. It is not possible to drive the bolt out of the shackle yoke, it must be pulled out with this tool.

First the grease nipple must be removed from the outer end of the shackle bolt. The DD-431 Puller Bolt is then screwed securely into the grease nipple threads. Assemble the puller cup and nut and remove shackle bolt as illustrated.

Be sure to relieve all strain on shackle bolt before attempting to remove bolt.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN

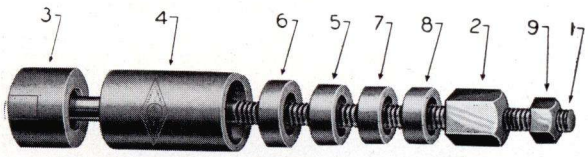


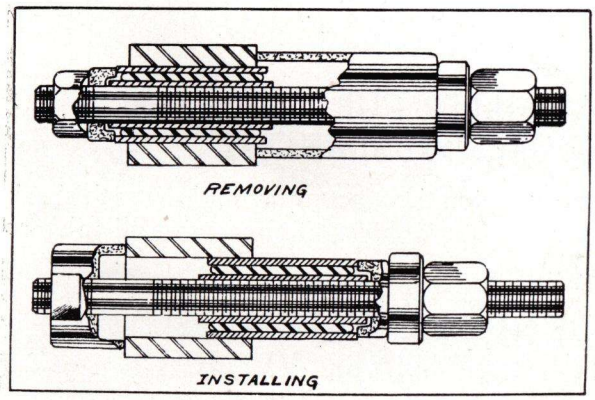
SPRING COVER LUBRICATING TOOL

* **C-408** For All Models with Metal Spring Covers **$2.50**

Springs equipped with metal covers need specialized lubrication — follow your service engineer's instructions — use this special tool and the recommended lubricant. Special plunger pierces inner cloth cover and allows lubricant to directly contact spring.

Standard angle Alemite fitting and 50 plugs for sealing lubricating opening in covers, supplied with each clamp. All parts for tool and additional plugs for lubrication openings available separately.





"SILENTBLOC" RUBBER SHACKLE INSTALLING and REMOVING TOOL

C-237 For All Plymouth, Dodge, DeSoto and Chrysler cars using this type of shackle with 5/8" shackle bolt **$8.50**

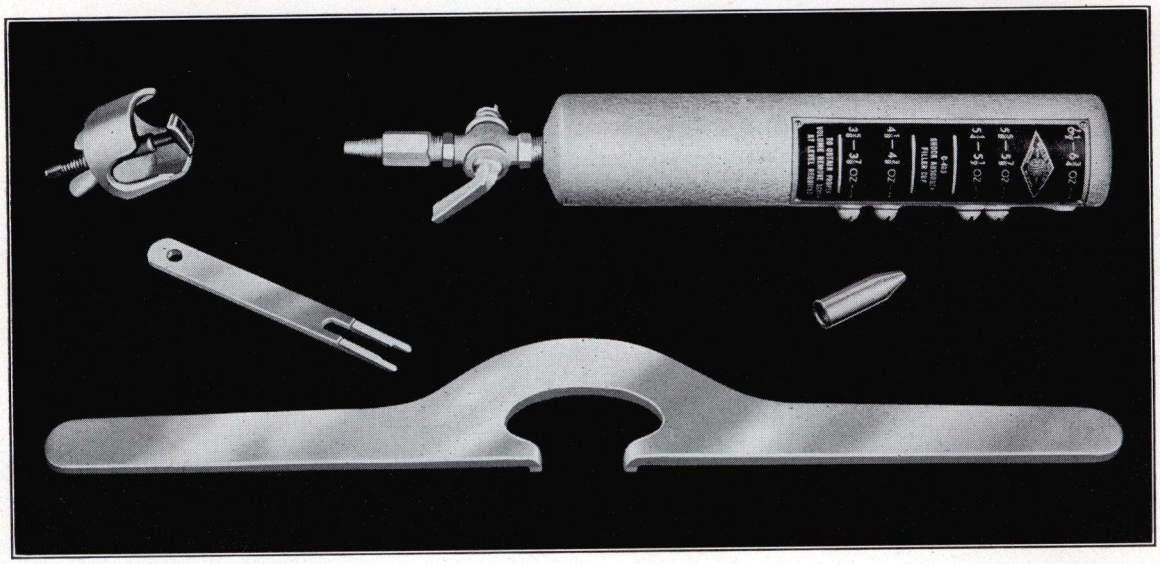
C-348 For Plymouth and Dodge Sixes using this type of shackle with 9/16" shackle bolts **$3.50**

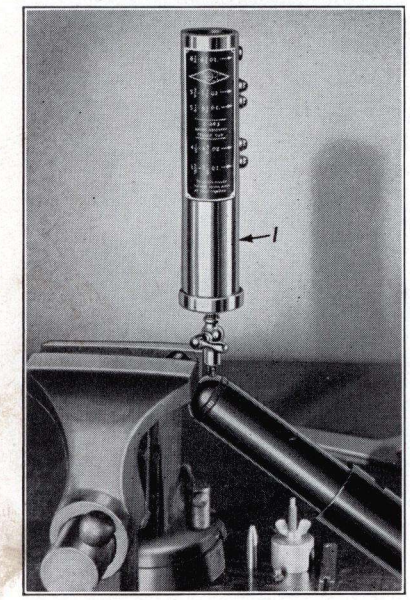
The puller screw of this tool has to be made of special steel and equipped with a ball bearing thrust washer to withstand the strain necessary to remove and install these shackles.

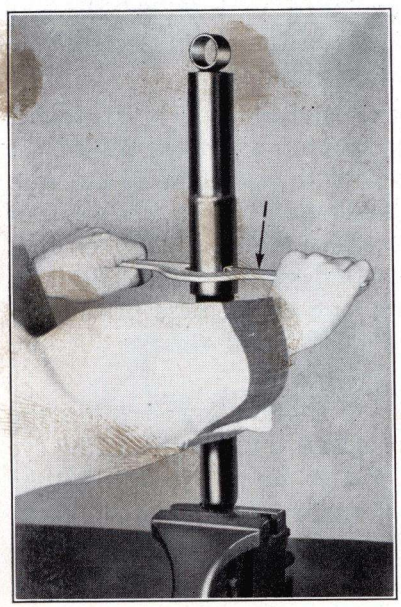
The puller screw is installed through the shackle bolt hole, the proper adapter assembled behind the shackle and held on with the small No. 9 hex nut. Cup No. 4 is then assembled on the front end of the puller screw to receive the shackle when it is pulled, install ball bearing thrust washer and large hex nut No. 2, being sure to oil these parts thoroughly, tighten hex nut and pull shackle out into cup.

To assemble a new shackle install it on the puller screw and assemble it through the spring eye or spring hanger. Puller block No. 3 is then screwed onto end of puller screw, install proper shackle adapter, ball bearing and hex nut and pull shackle into place.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN







SHOCK ABSORBER SERVICE TOOL KIT

C-451 For 1937 and 1938 Telescopic Shock Absorber on Plymouth, DeSoto and Dodge Models **$6.65**
Filler Cup only, used on Chrysler Models.

CONTAINS

MT-101	Spanner Wrench	**$1.35**
MT-102	Seal Assembly Puller	**.90**
MT-103	Compression Valve Tool	**.70**
MT-104	Piston Rod Assembly Thimble	**.85**
MT-105	Filler Cup	**3.55**

Filler Cup only part sold separately, except for replacements.

See Shop Manual and Service Bulletins for Specific Instructions

Detail instructions on the proper procedure for using these tools and repairing shock absorbers is in your factory shop manual and service bulletins.

SPECIAL FILLER CUP ACCURATELY MEASURES VOLUME OF FLUID

Accuracy in measuring the amount of fluid for each shock absorber is essential. Special Filler Cup measures all volumes required up to 7¼ oz. Tool number MT-105.

TOP GUIDE NUT EASILY REMOVED WITH MT-101 SPANNER WRENCH

The top guide nut holds the two sections of the shock absorber together. Use this special wrench and prevent damage to guide nut.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN

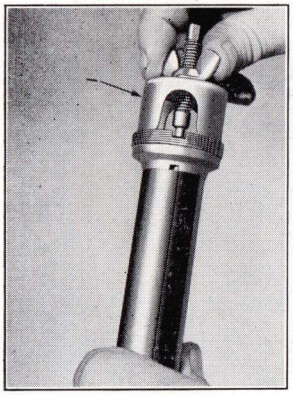


Fig. 1

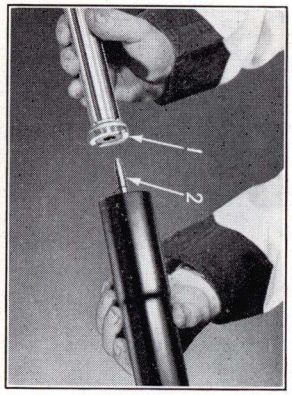


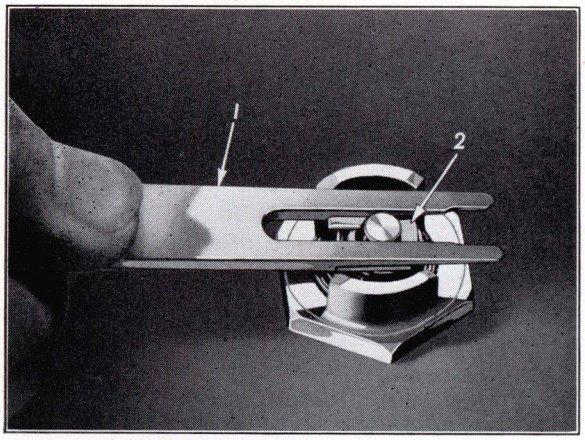
Fig. 2

SEAL REMOVED WITH PULLER MT-102

Fig. 1 illustrates how complete seal assembly is easily removed with this puller without danger of damaging other parts. Puller screw is "scooped" into seal from seal end of shock absorber assembly. Used seal assemblies should always be replaced.

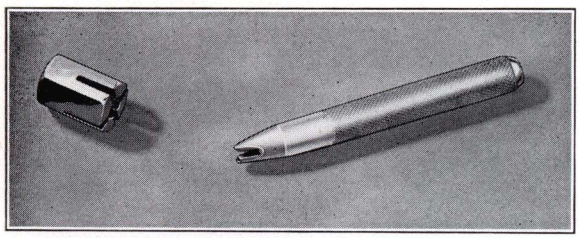
THIMBLE PROTECTS SEAL WHEN ASSEMBLING SHOCK ABSORBER

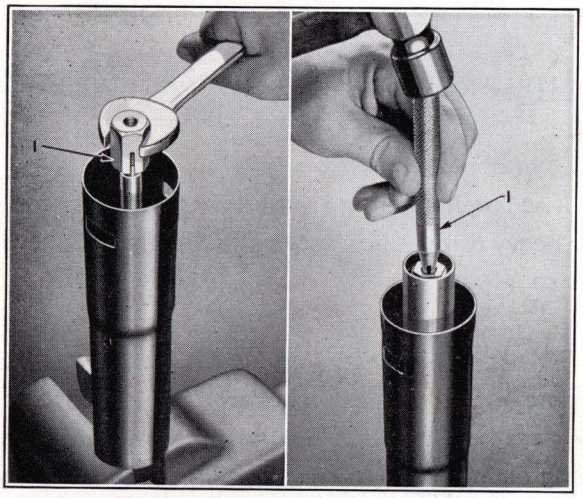
Every care must be taken to protect this important seal. Be sure thimble MT-104 is used as in Fig. 2 to protect seal from sharp edges of piston rod when assembling.



COMPRESSION VALVE EASILY TAKEN APART AND ASSEMBLED WITH TOOL MT-103

See your shop manual or service bulletins for correct assembly of compression valve parts. Special tool is used to compress spring and slide square lock washer on or off as illustrated. Notice how shoulder of tool engages edge of square lock washer.





Re-threading Piston Rod *Staking Piston Rod*

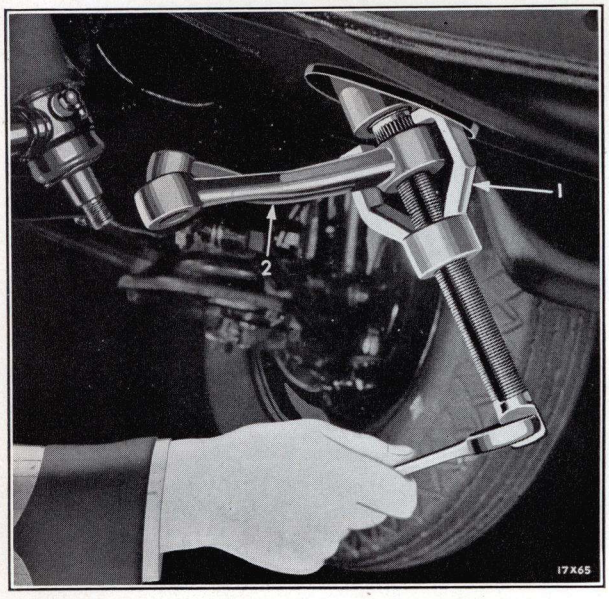
SHOCK ABSORBER PISTON ROD STAKING TOOL and RE-THREADING DIE

C-492 ● For All Plymouth, DeSoto and Dodge 1937 and 1938 Telescopic Shock Absorbers, PER SET **$1.75**

When assembling the piston rod nut on this type shock absorber be sure to stake it securely with this special tool.

The staking of this nut may burr the thread on the end of the piston rod requiring the die to rechase the thread for easy installation of the piston rod nut. Add this set of tools to your shock absorber service tool kit.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN



STEERING ARM PULLER

* C-143 "U" Type for All Models **$2.00**

This type of puller may be used where the space is extremely limited. It lends itself particularly to the cross steering tie rod assemblies where the steering gear arm must be removed carefully in the small space provided, as illustrated at the left.

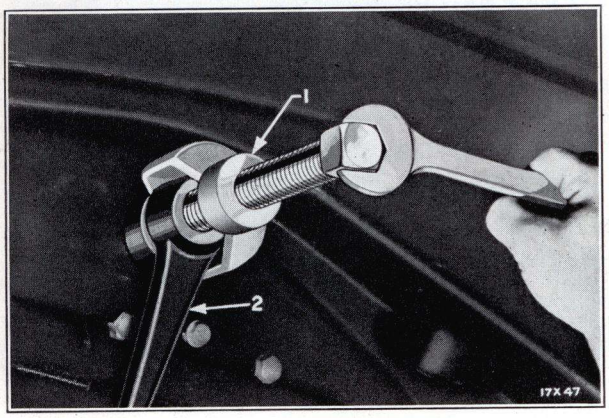
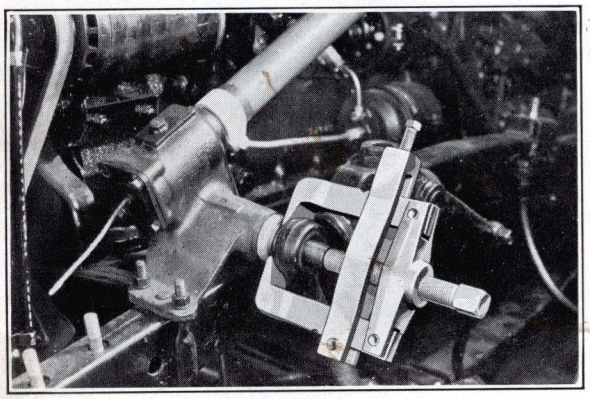


Illustration at the left shows how easily this puller may be used on a conventional type of steering gear assembly such as used on the 1938 Dodge and Plymouth models.

STEERING ARM PULLER

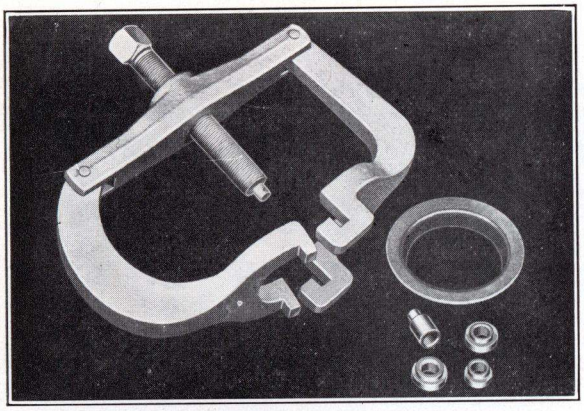
* C-410 Heavy duty type for Airflow and Truck Models **$6.50**

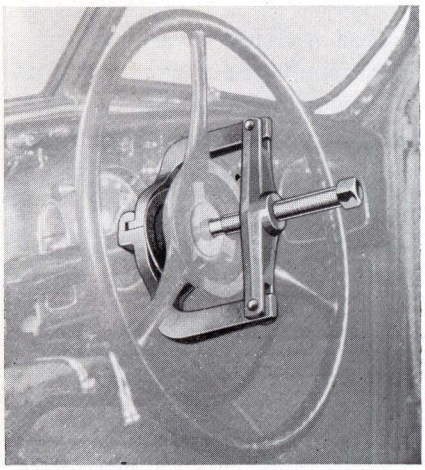


The larger steering arms on these models require this heavy duty puller, especially designed for severe service.

The sharp edged jaws are machined from chrome nickel alloy steel, carefully heat treated. They are held in place behind the arm with a fast acting clamp. Many varied pulling operations may be performed with this compact tool.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN





STEERING WHEEL PULLER

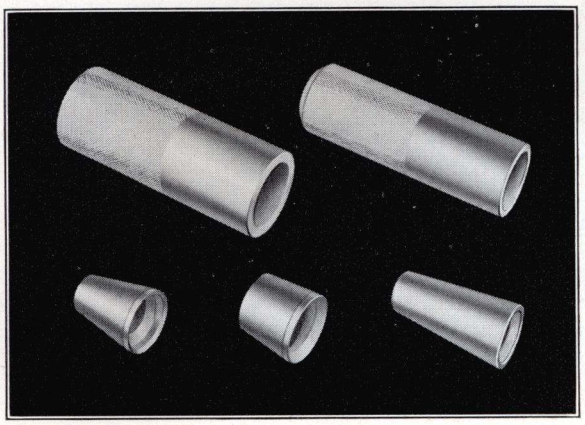
* **C-232** For All Models **$4.50**

Equipped with leather lined jaws for protection of the steering wheel hub and four sizes of buttons fitting all steering wheel columns. It is adaptable to either three or four spoke wheels.

Removing of steering wheels, without the proper puller, is very apt to break the wheel or cause other damage.

The interlocking jaws on the Miller puller assure an even pull on the wheel hub and together with the leather lined jaws, remove the steering wheel without marring or damaging it.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN

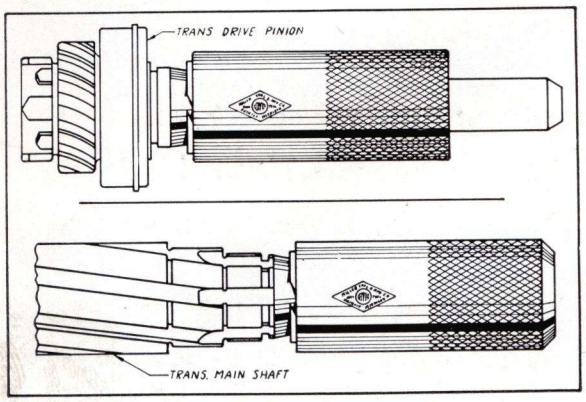


TRANSMISSION SHAFT SNAP RING INSTALLING TOOL

C-371 For 1933 to 1938 Models **$4.50**
Also fits clutch shaft Snap Ring on late models

The snap rings that locate the transmission drive shaft bearings are very difficult to install without these special tools.

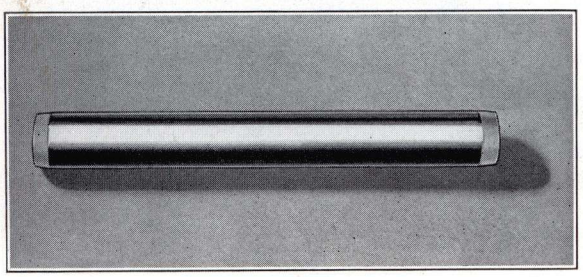
As illustrated at the left the snap ring is pushed up the proper cone, gradually being expanded so that when it drops off the end it drops into its proper groove. Different adapters are supplied for the various sizes of snap rings.



TRANSMISSION CLUSTER GEAR INSTALLING ARBOR

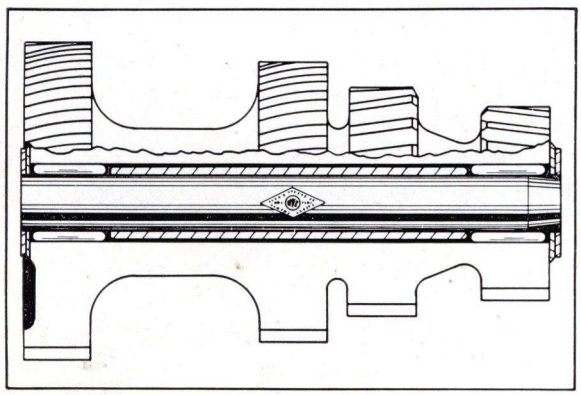
C-349 For 1933-'34 Models ¾" dia. **$1.00**

C-403 For 1935 to 1938 Passenger Car Models ¾" dia. **$1.00**



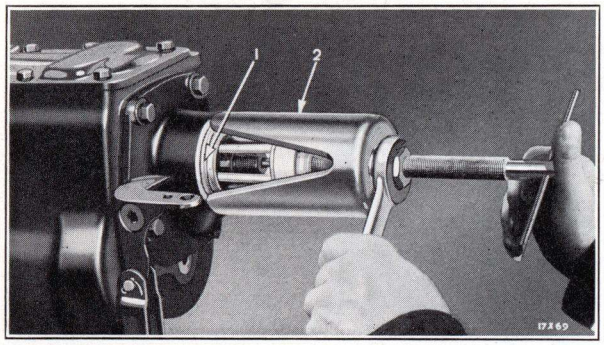
TRANSMISSION REVERSE IDLER GEAR INSTALLING ARBOR

C-464 For 1937 and 1938 Passenger Car Models **$0.30**



The roller bearings on which these gears are mounted, may be easily and correctly installed through the use of these special arbors. The gear shaft is pushed out with the correct arbor and as the shaft leaves the gear the arbor aligns the bearings. The arbors are short allowing the gear with the arbor assembled in it to be removed and installed as a unit.

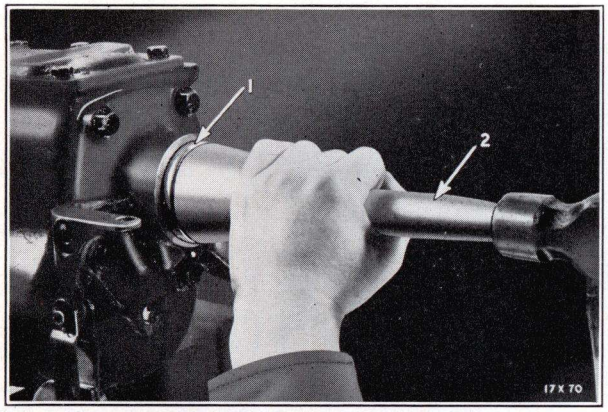
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN



TRANSMISSION REAR OIL SEAL PULLER

C-497 For All Passenger Cars **$4.50**

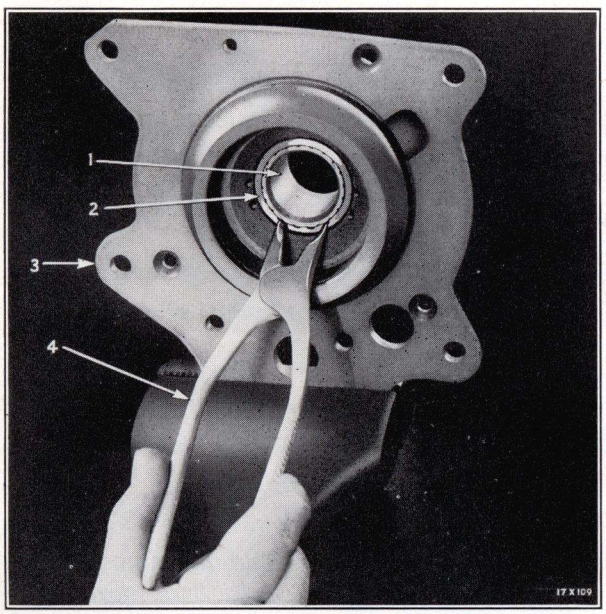
Much time is saved when servicing passenger car transmissions by using this tool. It is fitted with five husky puller legs that are inserted behind the oil seal by sliding them down the shaft splines. This type of puller does not put any strain on the transmission snap rings through pressure on the end of the transmission shaft. The pulling strain is transferred to the transmission case through the puller housing.



TRANSMISSION REAR OIL SEAL INSTALLING DRIFT

C-475 For All Passenger Car Models . . **$1.75**

A new oil seal should always be installed with the proper drift. These drifts fit the contour of the oil seal and provide a single point on which to drive eliminating any possibility of damaging a new seal. An extra blow after the seal has "bottomed" will expand the outer walls of the seal avoiding any leakage AROUND a new oil seal.



TRANSMISSION OVERDRIVE SUN GEAR LOCK RING PLIERS

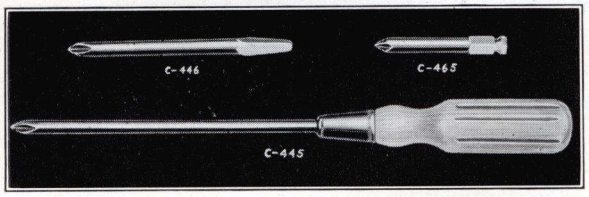
C-484 For Overdrive Models **$1.75**

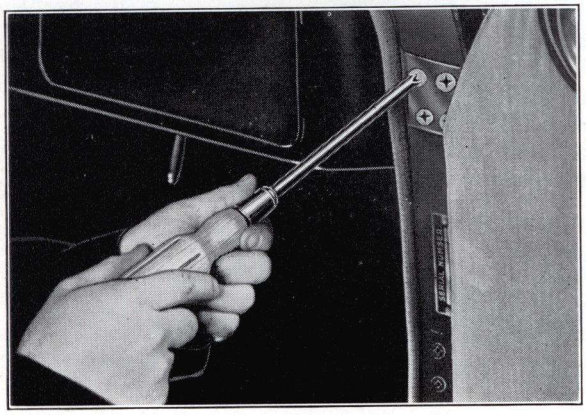
Here is a real time and patience saver! With these pliers you can reach down into the sun gear counter bore and remove the lock ring just as easily as the illustration shows.

Installing a sun gear lock ring with this tool is just as easy — order a pair today.

UNIVERSAL JOINT SERVICING TOOLS ARE IN REAR AXLE SECTION

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN





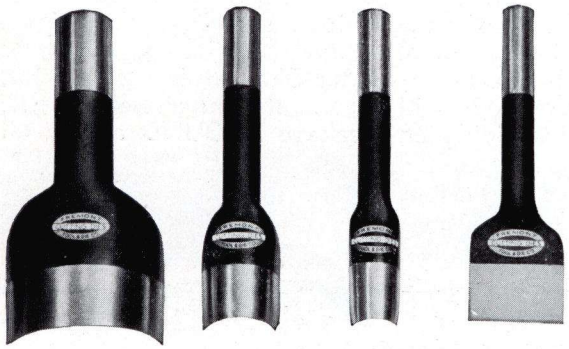
SPECIAL DOOR HINGE SCREW DRIVERS

* **C-445** Long, Hand Type **$0.75**

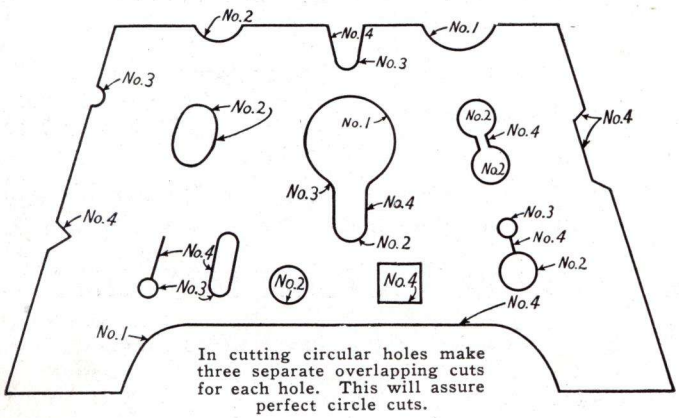
* **C-446** Bit for Carpenter's Brace **$0.65**

* **C-465** Bit for 7/16" hex. socket wrench . . **$0.75**

All 1937 and 1938 models use a double recessed type of screw that may be more readily tightened than the conventional single slot type. Equip your body repair department with the proper screw drivers to efficiently service this type of screw.



For cutting large circular holes | For medium circles and slots | For small circles and narrow slots | For straight cuts, squares and edges



In cutting circular holes make three separate overlapping cuts for each hole. This will assure perfect circle cuts.

FLOOR MAT FITTING KIT

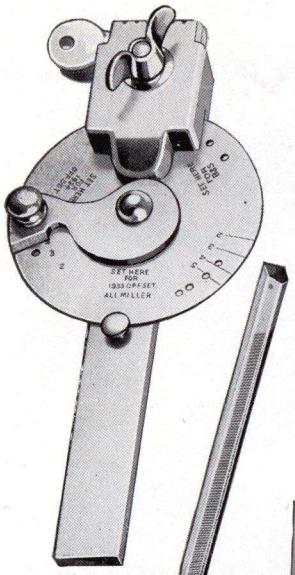
* **C-395** Four dies and pad complete in leatheret case. For All Models . . **$3.00**

UNIVERSAL FLOOR MATS EASILY "TAILORED"

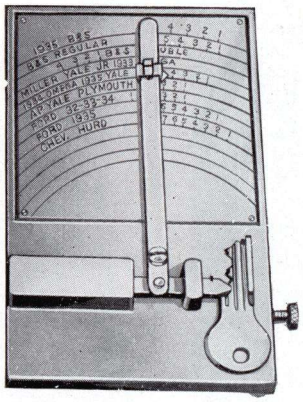
This kit of tools is especially adapted for use on felt backed and rubber mats for all cars. When cut to fit with these dies the mat has a clean tailored appearance giving the service or used car "Eye appeal." The service customer will be more satisfied and the used car will sell much more readily when equipped with die cut mats.

The labor alone saved in fitting floor mats will soon pay the cost of this kit. Improvised methods consume more time and do not usually compare with a job made with the proper tools. Eliminate jagged and uneven edges that tear easily; turn out a clean even die-cut mat with this kit.

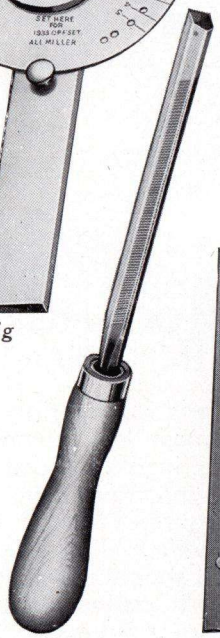
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN



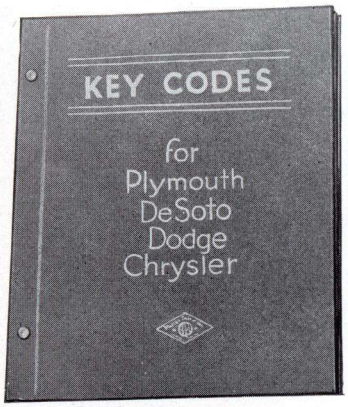
Jig



Key Code Indicator



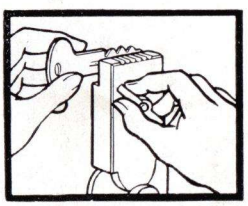
File



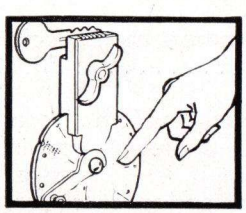
Code Book

Only a limited number of key blanks are enclosed with each outfit—order extra blanks through your local Chrysler Motors Parts Depot.

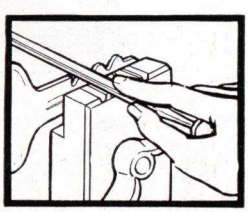
1. Find Code No. in Code book — it's easily located — Be sure to select proper key blank.



2. Place proper key blank in clamp of jig as illustrated. Wing nut clamps blank tightly.



3. Set dial to code desired. Loosen and tighten wing nut when setting for different grooves.



4. File key as deep as possible. Hardened guide plate prevents cutting too deep.

KEY CUTTING OUTFITS

C-393 ● Outfit complete with two jigs (C-4 and C-5), one file, key code indicator, 100 assorted key blanks and code book. For All Plymouth, Dodge*, DeSoto and Chrysler standard type keys **$16.20**
C-4 Jig cuts 1937 Dodge Briggs and Stratton C-250 to C-499 keys.

C-391 ● Outfit complete with one C-5 jig, one file, key code indicator, 50 assorted key blanks and code book. For 1935, 1936, 1937 and 1938 Plymouth, Dodge*, DeSoto and Chrysler standard type keys **$11.50**
1937 Dodge Briggs and Stratton C-3000 to C-3999 keys excepted.

C-487 ● Outfit complete with special jig, one file, key code and 12 key blanks for 1937 Dodge models using Briggs and Stratton C-3000 to C-3999 keys **$4.85**

C-421 ● Extra Key Files, each **$1.00**

These inexpensive outfits provide a simple means of producing a limited number of accurate keys at a low cost. New keys can be made on them from key code, key numbers, fragments of broken key or can duplicate from original. A limited number of key blanks are supplied with each outfit. Order extra key blanks from your nearest parts depot.

Present owners of 1935 outfits may use them for cutting 1937 and 1938 keys by using 1935 instructions.

EASY TO USE!

Using this equipment is exceptionally easy — First the jig is clamped in a vice — Look up Code by key number in Code Book; See illustration No. 1. The proper key blank is specified at top of page — insert blank in jig; illustration 2. The number opposite Key Number in Code Book indicates proper setting of dials; illustration No. 3. Notice various settings on C-392 Jig for different years, be sure that dial is set to correct year. File groove in key as indicated by code. Hardened guide plate in jig prevents filing too deep; illustration No. 4. Be careful not to file too vigorously and dull file on hardened guide plate.

Jigs accommodate both right and left hand keys — be sure to select proper blank and follow code correctly. Check finished key in Code Indicator after removing burr with sharp edge of file. Equipment is easily carried to a car in need of key service. Let car owners know that you have these outfits — win new service customers.

KEY CODE BOOKS

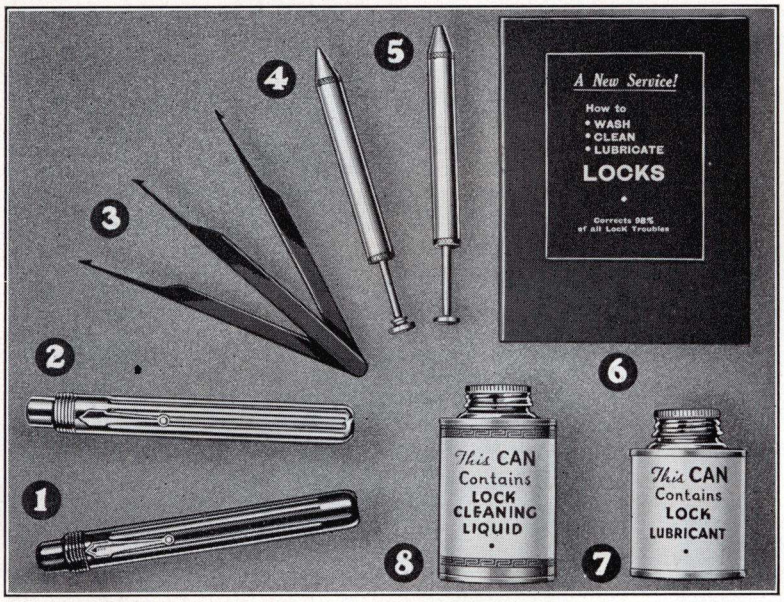
Available ONLY to Authorized Dealers

C-419 ● Complete for Plymouth, Dodge, DeSoto, and Chrysler Models **$2.50**

C-441 ● For 1935, 1937 and 1938 Models (Dodge late 1937 B. & S. Keys excepted) **.$1.00**

These codes are accurately compiled and are entrusted to only authorized Dodge, DeSoto and Chrysler dealers for THEIR OWN USE, in making keys for owners of Plymouth, Dodge, DeSoto and Chrysler products. Every dealer is expected to cooperate with their factory in keeping these codes STRICTLY CONFIDENTIAL.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN



LOCK CLEANING and LUBRICATING KIT

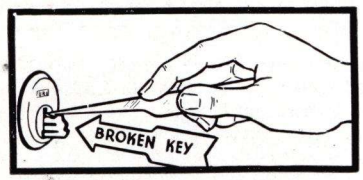
* C-420 For All Models . . . **$3.50**

Contains

1. Lubricating Gun, Pocket Case (Dark finished)
2. Cleaning Gun, Pocket Case (Light finished)
3. Three Broken Key Extractors
4. Lubricating Gun (Dark finished)
5. Cleaning Gun (Light finished)
6. Instructions
7. Lock Lubricant
8. Lock Cleaner

Cleaner gun throws whirling spray of cleaning fluid in lock, washing away gum and dirt.

Lubricant gun injects dry, powder lubricant deep into lock. One shot is usually enough.



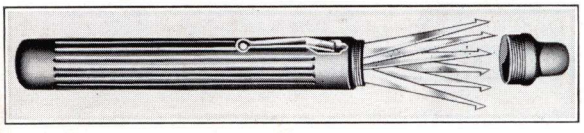
How to remove broken key part from lock with special extractors.

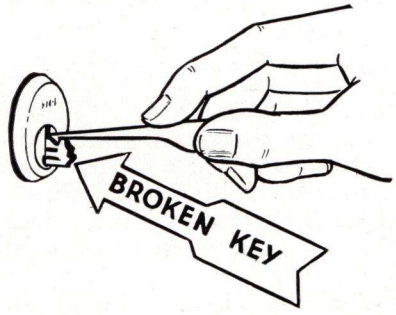
CORRECT LOCK LUBRICATION IMPORTANT

Washing and lubricating locks will correct most lock complaints. Breaking off of keys, corroded locks, difficulty in inserting key, sticky locks and many cases of locks freezing can be eliminated by using this small kit. Oil should never be used in car locks, it collects dust and forms a sticky gum preventing free action of tumblers and insertion of Key.

KEY SERVICE BANNER PACKED WITH EACH KIT

A large (2 x 4 feet) cloth banner is included with each kit. It will tell your customers of a new key service that you now offer. Additional banners available at slight extra charge.





BROKEN KEY EXTRACTORS

* C-431 Set of Six Extractors in neat metal pocket case **$1.00**

Every service department has faced the necessity of removing a fragment of a broken key and knows how difficult a problem it is. These extractors are made of tempered spring steel, correctly shaped to hook into the notches or grooves of car keys. Be sure to turn lock cylinder right side up before attempting to remove broken part of key.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN

BUILD THIS SIMPLE DISPLAY BOARD IN YOUR OWN SHOP

On the opposite page is complete instructions on how to build this simple inexpensive tool display board. It will make your special service tools do double duty. It will help keep your tools clean and in good condition. It will help keep your tools easily accessible and always represent a permanent inventory of your investment. Have your shop build it now — using tool and sign templates, hanger hook and drawing shown on next page.

Use It to Merchandise Service

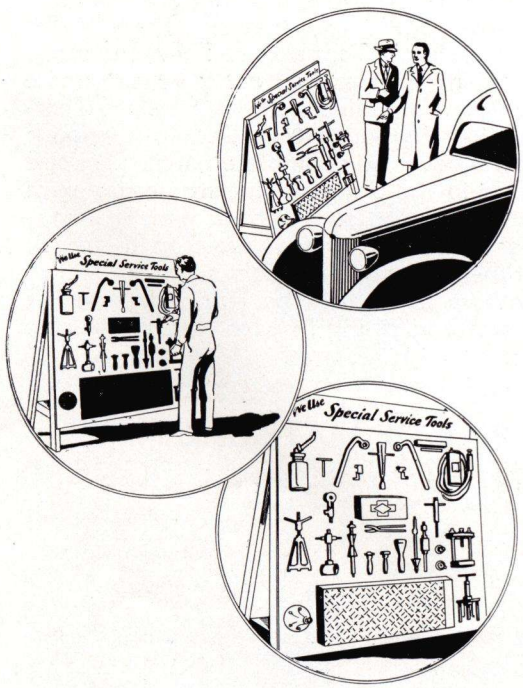
Make your Service more convincing to your service customers by displaying your special service tools. Have your new and used car salesmen use your tool display to put added punch in their sales talks — it can often be the point that'll swing the deal. The sign on the board will interest your waiting service customers and help them understand why you are their best source of service.

A special tool display suggests "plus" service selling to your service salesmen. It constantly reminds them to show the service customer the tools used to insure original, built-in-factory accuracy. This will often sell a complete service operation when only a temporary adjustment was requested.

Encourages Clean—Workable Tools

In addition to the service merchandising possibilities of this board, its utility value cannot be overestimated. By keeping your service tools on a neat, clean display board the mechanic is encouraged to clean each tool before replacing it on the board. By having each tool on continuous display, broken tools cannot be easily returned to the board unnoticed. A display board will, therefore, pay dividends by assuring your tools of proper care.

The board has two panels, providing ample space for special tools on one side while the opposite side is used for standard tools such as electric drills, soldering iron and others. A shelf provides space for tools and supplies kept in cases.



A Place for Every Tool—Every Tool in Its Place

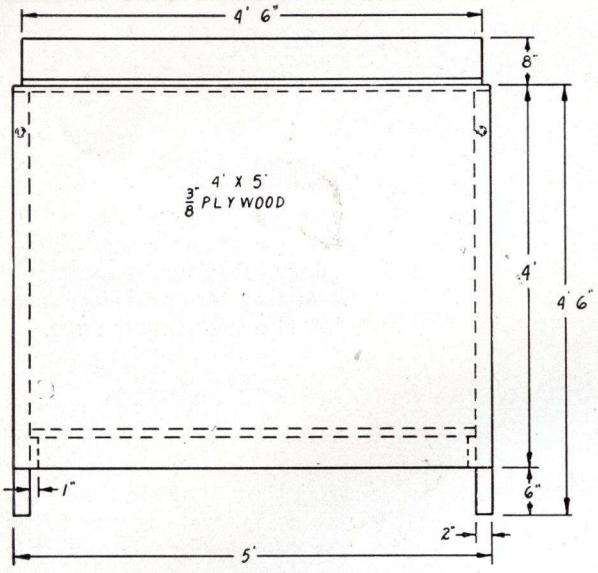
This board provides a simple answer to this problem by having each tool outlined and hooks on which to hang them.

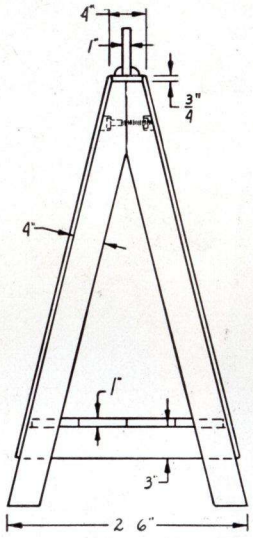
A complete set of Stencils outlining the shape of each essential tool also indicates the location of each tool hanger hook, and is available for 4′ x 5′ panels. The outline of each tool quickly indicates the position of each tool and provides only one place for it — the right place. The words of the tool display board sign are included in this inexpensive stencil so that the sign may be easily made by your own paint department.

Use this board on the service floor or in the tool crib. If in the crib, tool checks can be dropped on the hanger hook as each tool is taken out so that any tool can be located on a minute's notice.

The shelf is used for tools kept in cases.

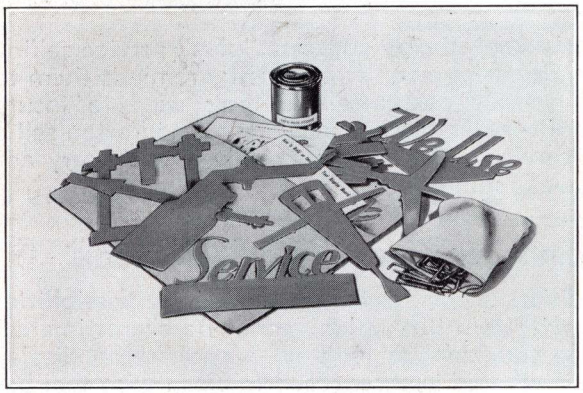
MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN





EASY TO BUILD

All materials are standard and may be obtained from your local lumber supply house, with exception of the tool template package listed below. Anyone can build it — order parts specified in bill of material listed below.



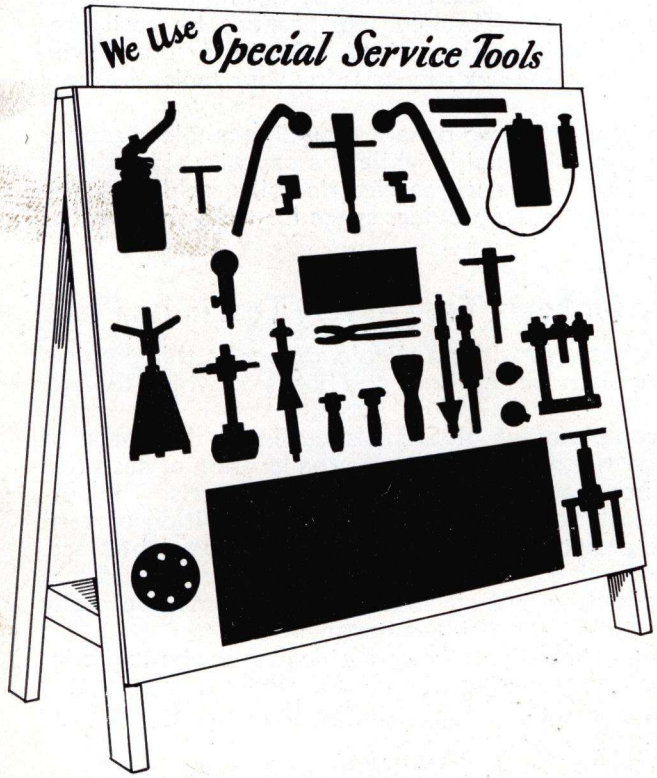
TOOL TEMPLATES and SIGN STENCIL

C-471 ●

Set of Minimum Essential Tool Templates and sign Stencil with pint can of adhesive and 53 Hanger Hooks for Chrysler, DeSoto and Plymouth Tools **$2.70**

DD-805 ●

Set of Minimum Essential Tool Templates and sign Stencil with quart can of adhesive and 67 Hanger Hooks for Dodge and Plymouth Tools **$3.75**



Sign Stencil and Tool Templates are made of special adhesive paper. Position of hanger hooks are indicated on each Template. They are easily attached to board with special adhesive, an ample supply of which is supplied with each set of Templates. Chrysler-Plymouth and DeSoto-Plymouth Templates each cover one complete panel. For the few more tools in the Dodge-Plymouth group, extra tool templates are used on the back panel. Room still remains for other standard tools on this back panel. Outlines of standard tools such as electric drills and others can easily be made by drawing around the tool and filling in with Robin Egg Blue paint with a small brush.

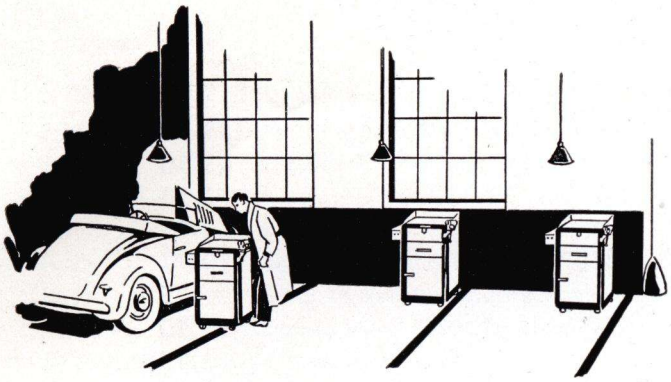
BILL OF MATERIAL

2 pieces 3/8"x4'x5' Plywood
2 pieces 2"x4"x10' Clear White Pine
1 piece 1"x4"x5' Clear White Pine
2 pieces 1"x6"x10' Clear White Pine
1 piece 1"x3"x5' Clear White Pine
1 piece 1"x8"x4'6" Clear White Pine
1 piece 3/4"x9', 1/4 Round Pine Moulding
1 quart Robin Egg Blue Lacquer
1 quart Aluminum Lacquer
C-471 or DD-805 set of tool template and sign stencil with Hanger Hooks
1 lb. No.10 Finishing Nails
26 No. 10x1 3/4" Flat Head Wood Screws
2 3/8"x4" Bolts with nuts and washers

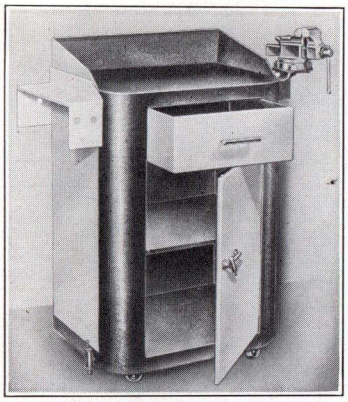
With this material your service department can make this useful tool display board in a couple of hours. Start It Now!

MILLER TOOL & MFG. CO. AUTO TOOLS DETROIT MICHIGAN

ALL STEEL TOOL TOTER



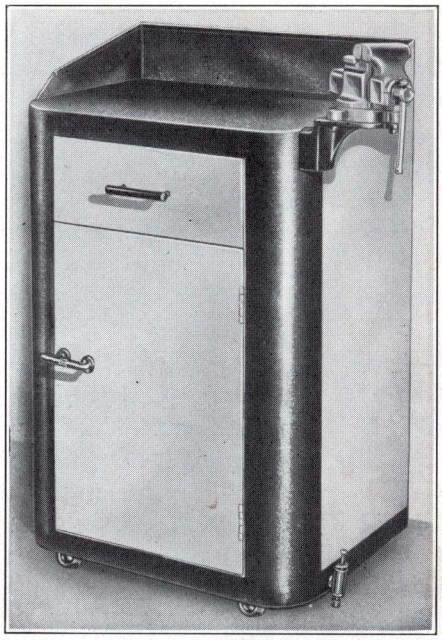
* C-473 Deluxe Model with Rubber Tired Casters **$30.00**



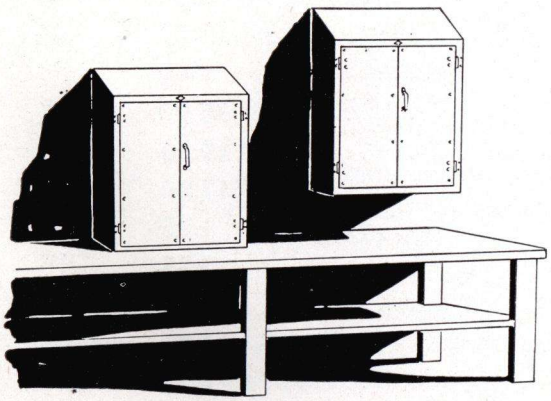
SPECIFICATIONS

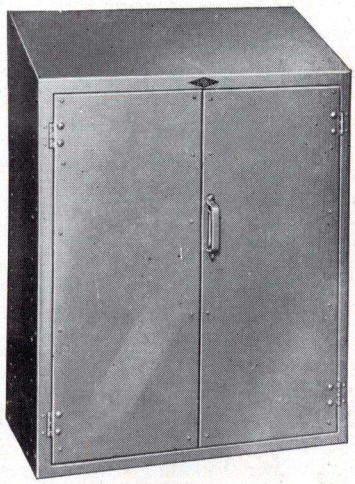
Height	35"
Width	24"
Depth	18"
Caster Diameter	2½"
Net Weight	99 lbs.
Shipping Weight	120 lbs.

This modern toter makes it unnecessary to tolerate old fashioned greasy and untidy work benches in an otherwise modern service department. The heavy gauge steel construction makes it a rugged piece of shop equipment that may be used day in and day out.



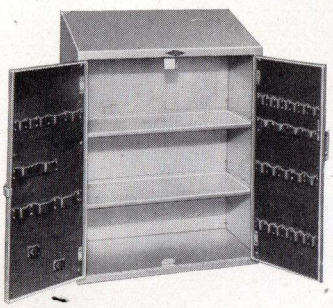
WALL OR BENCH TYPE HAND TOOL CABINET





SPECIFICATIONS

Height	33"
Width	24"
Depth	12"
Net Weight	60 lbs.
Shipping Weight	80 lbs.



* C-459 Steel Cabinet with Wood Lined Back and Door Pouches **$12.70**

* C-509 Same WITHOUT Wood Lined Back and Door Pouches **$10.50**

For the Service Department that prefers benches this steel cabinet provides an ideal method of keeping and protecting each mechanic's hand tools. The sloping top discourages the laying away of unused parts or tools, while its spacious interior provides ample room for all hand tools and other necessities.

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN

NUMERICAL INDEX AND NET PRICE LIST

TOOL NO.	DESCRIPTION	PRICE	PAGE NO.
MT-16	Camber, Caster and King Pin Inclination GAUGE	$ 9.00	6
MT-19-C	Miller TruBrake Drum Checking and Brake GAUGE with 6 Bushings	39.50	21
MT-19-E	Miller TruBrake Drum Checking and Brake GAUGE with 8 Bushings	43.50	21
CM-21	Rear Axle Pinion Shaft Nut WRENCH	2.50	17
C-27	Crank Shaft Gear PULLER	4.75	48
C-29	King Pin Bushing Line REAMER — size .875"	10.00	4
DD-29	Long Tappet WRENCH ½ inch	.75	41
MT-29	Miller TruBrake Lining REFACER with 110 Volt Motor	62.50	22
DD-34	Long Tappet WRENCH 9/16"	.75	41
MT-34-B	Miller TruBrake GAUGE WITH BUSHINGS	69.50	21
MT-34-S	Miller TruBrake Gauge TRUCK ADAPTER KIT	30.00	21
CM-38	Valve Guide Expansion REAMER — size .375"	3.00	43
CM-38-1	Valve Guide Expansion REAMER — size .370"	3.00	43
MT-39	Combined MT-19-C and MT-29 SET	93.50	22
C-41	Clutch Shaft Pilot Bushing REMOVER	2.50	27
MT-44	Miller TruBrake Truck Lining REFACER	72.50	22
CM-45	Cylinder Compression INDICATOR	5.50	40
MT-49	Combined MT-34-B and MT-44 SET	132.50	22
CM-57	Impulse Neutralizer, Fan Pulley and Crankshaft Gear PULLER	2.50	50
C-58	King Pin Bushing Line REAMER — size 1.000"	11.60	4
DD-82-2	Piston Pin Bushing Line REAMER — size .859"	8.35	44
CM-83	Valve Guide Removing and Installing TOOL including latest parts	8.25	40
CM-83-M	Valve Guide Removing and Installing Tool Modernizing KIT	4.95	40
MT-101	Spanner WRENCH	1.35	56
MT-102	Seal Assembly PULLER	.90	56
MT-103	Compression Valve TOOL	.70	56
MT-104	Piston Rod Assembly THIMBLE	.85	56
MT-105	Shock Absorber Filler CUP	3.55	56
CM-119	Cylinder Bore Test INDICATOR	14.75	44
C-143	Steering Arm PULLER	2.00	58
DD-146-B	Connecting Rod and Piston Aligning FIXTURE	35.00	45
CM-150	Ignition Timing INDICATOR	19.50	38
C-158	Rear Axle Shaft and Inner Bearing Cup PULLER	17.50	10
C-184	Rear Axle Shaft Inner Bearing Cup Installing DRIFT	1.75	14
C-188	Rear Axle Shaft Inner Bearing Cup Installing DRIFT	1.75	14
C-198	Brake Lining Riveting TEMPLATES	3.50	23
C-201	Rear Axle Shaft Inner Oil Seal Installing DRIFT	1.75	13
C-202	Rear Axle Shaft Inner Oil Seal Installing DRIFT	1.75	13
C-204	Engine Lifting FIXTURE	16.00	51
C-214	Rear Wheel Puller Screw WRENCH	1.60	17
C-232	Steering Wheel PULLER	4.50	59
C-237	Rubber Shackle Installing and Removing TOOL	8.50	55
C-240	Feeler GAUGE	1.25	35
C-241	Rear Axle Shaft Inner Oil Seal DRIFT	1.75	13
C-244	Stud Removing and Installing TOOL	1.65	51
C-249	Valve Guide Expansion REAMER — size .343"	2.85	43
C-259	Piston Ring Installing and Removing TOOL — size 3 1/8"	1.45	46

Use Correct Noun As Indicated When Ordering

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN

TOOL NO.	DESCRIPTION	PRICE	PAGE NO.
C-260	Piston Ring Installing and Removing TOOL — size 3¼"	$ 1.45	46
C-261	Piston Ring Installing and Removing TOOL — size 3⅜"	1.45	46
C-262	Piston Ring Installing and Removing TOOL — size 3½"	1.45	46
C-263	Piston Ring Installing and Removing TOOL — size 3⅝"	1.45	46
C-264	Piston Ring Installing and Removing TOOL — size 2⅞"	1.45	46
C-265	Valve Tappet Reamer SET	8.50	43
C-266	Piston Ring Installing and Removing TOOL — size 3"	1.45	46
DD-286	Clutch Shaft Pilot Bushing Installing and Burnishing TOOL	6.00	27
C-293	Tapered Roller Bearing PULLER with seven plates	23.00	11
C-305	Main Bearing Cap PULLER	3.50	47
C-311	Radiator Flush GUN	4.50	29
C-312	Brake Spring PLIERS	1.45	23
C-315	Brake Cylinder Hone and LAP with two sets of stones and felts	20.00	24
C-319	Rear Wheel Hub PULLER	3.50	17
C-328	King Pin Bushing Removing and Installing TOOL	3.25	3
C-329	Silent U. Shackle Adjusting GAUGE	1.75	54
C-342	King Pin Bushing Removing and Installing TOOL	2.25	3
C-343	King Pin Bushing Line REAMER — size .734"	8.00	4
C-348	Rubber Shackle Installing and Removing TOOL	3.50	55
C-349	Transmission Cluster Gear Installing ARBOR	1.00	60
C-355	Front End Puller KIT	9.50	50
C-355-2	Crankshaft Nut WRENCH	1.50	47
C-355-16	Crankshaft Nut WRENCH	1.50	47
C-357	Valve Spring COMPRESSOR	1.70	41
C-358	Rear Axle Shaft Inner Oil Seal and Pinion Oil Seal PULLER	4.50	12
C-359	Pinion Oil Seal Installing DRIFT	1.75	13
C-360	Universal Clutch Plate Aligning ARBOR	3.50	26
C-361	Camber Adjusting WRENCH	1.95	7
C-362	Automatic REFILLER for Master Brake Cylinder, with 2 Adapters	4.25	19
C-363	Caster Adjusting WRENCH	.75	7
C-365	Crank Shaft Nut WRENCH	2.50	47
C-369	King Pin Bushing Line REAMER — size .795"	9.25	4
C-371	Transmission Shaft Snap Ring Installing TOOL	4.50	60
C-372	Hardened Insert Valve Seat Grinding EQUIPMENT	75.00	42
C-373	Water Pump Shaft Bushing Puller and Installing TOOL	3.75	31
C-374	Spark Advance Checking LIGHT	5.60	34
C-379	King Pin Bushing Line REAMER — size .9375"	11.95	4
C-384	Water Pump Bushing Line Burnisher and Housing FACER	7.50	32
C-385	Universal Piston Ring COMPRESSOR	.95	46
C-386	Valve Seat Grinding and Installing EQUIPMENT	93.50	42
C-387	Oversize Valve Insert Installing EQUIPMENT	22.75	42
DD-388	Rear Wheel PULLER (Trucks)	4.00	16
C-389	SET of 10 Piston Ring Installing Tools	12.95	46
C-390	SET OF 5 Piston Ring Installing Tools	6.95	46
C-391	Key Cutting OUTFIT	11.50	63
C-393	Key Cutting OUTFIT	16.20	63
C-394	Piston Fitting GAUGE AND SCALE	1.25	45

Use Correct Noun As Indicated When Ordering

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN

TOOL NO.	DESCRIPTION	PRICE	PAGE NO.
C-395	Floor Mat Fitting KIT	$ 3.00	62
C-396	Dial INDICATOR only	9.00	47
DD-398	Passenger Car Type "WEE GEE" BOARD	37.50	8
C-399	Differential Carrier and Transmission Swivel STAND	15.00	15
DD-399	Truck and Bus Type "WEE GEE" BOARD	65.00	8
C-400	Camber Adjusting WRENCH	1.95	7
C-402	Precision KIT	1.75	33
C-403	Transmission Cluster Gear Installing ARBOR	1.00	60
C-406	Differential Adjusting SPANNERS — each	1.65	15
C-406-A	Differential Adjusting SPANNERS — per pair	2.95	15
DD-406	Pinion and Transmission Shaft Nut WRENCH	2.50	9
C-407	Camshaft Sprocket Hub PULLER	1.95	48
C-408	Spring Cover Lubricating TOOL	2.50	55
C-410	Steering Arm PULLER	6.50	58
C-411	Clutch Compressing and Adjusting FIXTURE	18.75	25
C-411-34-A	1938 Clutch Adjusting Fixture ADAPTERS	1.50	26
C-412	Water Pump Fan Hub PULLER	1.50	30
DD-412	Camshaft Sprocket PULLER	4.75	48
C-413	Rear Axle Outer Bearing Cup Installing DRIFT	1.75	13
C-416	Brake Cylinder CLAMPS Set of Four	1.00	24
C-419	Key Code BOOK	2.50	63
C-420	Lock Washing and Lubricating KIT	3.50	64
C-421	Key Cutting FILE — each	1.00	63
C-423	Brake Lining Riveting TEMPLATE	3.50	23
DD-423	Rear Wheel PULLER	2.85	16
C-424	Hydraulic Brake Bleeder TANK Standard	18.50	19
C-425	Vacuum METER	3.50	52
DD-425	Gasoline Mileage TESTER (GASOMETER)	7.92	53
C-428	Hydraulic Brake Bleeder TANK Portable	21.50	19
DD-428	Universal Camber, Caster and King Pin Inclination GAUGE	39.50	8
DD-429	Rear Wheel Bearing Adjusting Nut WRENCH	3.50	9
C-430	Dial INDICATOR complete with Swivel Rods and Clamp	12.75	28
C-431	Set of 6 Broken Key EXTRACTORS	1.00	64
DD-431	Rear Spring Shackle Bolt PULLER	1.75	54
C-432	Headlight Bulb Removing PLIERS	.50	36
DD-432	Rear Wheel Bearing Adjusting Nut WRENCH	4.25	9
C-433	Pedal DEPRESSOR	.75	24
C-434	Long Tappet WRENCH — size 3/8"	.75	41
C-435	Ignition Timing GAUGE	14.50	37
DD-435	Full Floating TURNTABLES — per pair	54.00	8
DD-436	Wheel Balancing FIXTURE	19.75	5
C-437	Drive Type Lubrication Fitting Installing TOOLS — per pair	.72	4
DD-437	Rear Wheel Bearing Adjusting Nut WRENCH	4.85	9
C-438	Hub Cap and Grease Cap Removing TOOL	1.40	5
DD-438	Rear Wheel Bearing Adjusting Nut WRENCH	4.75	9

Use Correct Noun As Indicated When Ordering

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN

TOOL NO.	DESCRIPTION	PRICE	PAGE NO.
C-439	Headlight Lens Removing and Installing TOOL	$ .50	35
DD-439	Camshaft and Crankshaft Gear and Crankshaft Drive Pulley Installing TOOL	3.25	49
DD-440	Crankshaft Gear and Fan Pulley PULLER	2.75	49
C-441	Key CODE BOOK	1.00	63
C-443	Brake Shoe Anchor Bolt Lock Washer Removing TOOL	1.00	23
DD-443	Camshaft Gear PULLER	2.50	49
C-444	Rear Wheel Puller Screw WRENCH	1.75	17
C-445	Double Recessed, 6 inch Blade, Hand Type SCREW DRIVER	.75	62
C-446	Double Recessed BIT for Carpenter's Brace	.65	62
C-449	Carburetor Float Level Checking GAUGE	.30	52
C-451	Shock Absorber Service Tool KIT	6.65	56
C-452	Universal Joint Flange PULLER	2.45	14
C-453	Generator Pulley PULLER	4.95	34
C-454	Lower Cylinder Block Water Drain Cock WRENCH	.95	30
C-455	Starting Motor Nut WRENCH	1.00	33
C-459	Steel Tool CABINET	12.70	67
C-464	Transmission Reverse Idler Gear Installing ARBOR	.30	60
C-465	Double Recessed Screw Driver BIT with 7/16" Hex. Shank	.75	62
C-466	Piston Ring Installing and Removing TOOL 3 1/16"	1.45	46
C-467	Piston Ring Installing and Removing TOOL 3 3/16"	1.45	46
C-468	Piston Ring Installing and Removing TOOL 3 5/16"	1.45	46
C-469	Piston Ring Installing and Removing TOOL 3 7/16"	1.45	46
C-470	Hot Oil FLUSHER complete — (Parts list on request)	75.00	18
C-471	TOOL TEMPLATE SET	2.70	66
C-473	Tool TOTER with Rubber Casters	30.00	67
C-475	Transmission Rear Oil Seal Installing DRIFT	1.75	61
C-476	Rear Wheel Hub PULLER	4.25	17
C-482	Special Short Type Valve LIFTER	1.85	41
C-483	Fuel Pump Pressure Checking GAUGE	3.95	52
C-484	Transmission Overdrive Sun Gear Lock Ring PLIERS	1.75	61
C-485	Tension Indicating WRENCH	17.50	39
C-486	Valve Lock Installing TOOL	1.95	41
C-487	Key Cutting OUTFIT	4.85	63
C-490	Headlight Voltage Checking SOCKET	2.75	36
C-492	Shock Absorber Staking Tool and Re-threading Die — per SET	1.75	57
C-496	Universal Joint Flange Installing TOOL	2.25	14
C-497	Transmission Rear Oil Seal PULLER	4.50	61
C-498	Water Pump Impeller PULLER	1.85	30
C-499	Axle Shaft PULLER	5.50	10
C-502	Water Pump Housing Seat REFACER	3.50	32
C-508	Long Tappet WRENCH Size 7/16"	.75	41
C-509	Wall CABINET Less Door Pouches and Back Lining	10.50	67
C-518	Piston Ring Installing and Removing TOOL — size 2 11/16"	1.45	46
C-519	Piston Ring Installing and Removing TOOL — size 2 3/4"	1.45	46
C-520	Piston Ring Installing and Removing TOOL — size 2 15/16"	1.45	46
C-521	Piston Ring Installing and Removing TOOL — size 3 7/8"	1.45	46
C-524	Tension Indicating WRENCH	9.75	39
CM-549	Utility PULLER	8.75	16
DD-804	Pinion Oil Seal PULLER	5.75	12
DD-805	TOOL TEMPLATE SET	3.75	66
DD-807	Pinion Oil Seal Installing DRIFT	1.75	13
DD-808	Pinion Oil Seal Installing DRIFT	1.75	13

Use Correct Noun As Indicated When Ordering

MILLER TOOL & MFG. CO. AUTO TOOLS DETROIT MICHIGAN

All parts for Miller Tool Special Service Tools are available. Prompt delivery of all parts listed may be obtained by supplying us with the proper detail number and description. Parts desired which are not listed can also be furnished by supplying us with a brief description and the tool number on which the part applies, or the year and model of the car or truck.

MT-16 CAMBER, CASTER AND KING PIN GAUGE

(Illustrated on Page 6)

MT-16-1	60° and 40° GAUGE ONLY	$ 5.00
MT-16-10	20° Angle PLATE	1.00
MT-16-29	Passenger Car Spindle ADAPTERS, each	1.50
MT-16-33	TRUCK Spindle ADAPTERS, each	1.50

M-19 BRAKE DRUM AND SHOE GAUGE

(Illustrated on Page 21)

MT-19	GAUGE ASSEMBLY, Less Bushings	$29.50
MT-19-1	Shoe Gauge FIXTURE, only	9.00
MT-19-6	DRUM GAUGE ASSEMBLY, only	3.50
MT-19-6-2	Drum Gauge PIN, Long	.35
MT-19-6-4	Drum Gauge PIN, Short	.25
MT-19-7-2	Three-point Gauge ARBOR only	4.50
MT-19-7	Three-point Gauge ARBOR ASSEMBLY	9.00
MT-19-17	Drum ARBOR with Spacer and Wing Nut	5.50
MT-19-18	WING NUT (Drum Arbor)	.50
MT-19-20	SPACER (Drum Arbor)	.35
MT-19-30 to 70, inc.	Passenger Car Type BUSHINGS, each	2.00
MT-19-113	Centering CONES (Drum Arbor), per pair	5.00

MT-19 BUSHING CHART

CHRYSLER

Year	Model	Front	Rear
1933	CO	30	41
1933	CT	32	47
1933	CQ	32	47
1933	CL	34	35
1934	CU	34	47
1934	CV	34	47
1934	CA	32	41
1934	CB	32	41
1934	CX	34	47
1935	C-6	44	41
1935	CZ	32	41
1935	C-1	34	47
1935	C-2	34	47
1935	C-3	34	47
1936	C-7	44	41
1936	C-8	32	41
1936	C-9	34	47
1936	C-10	34	47
1936	C-11	34	47
1937	C-14	32	41
1937	C-15	34	35
1937	C-16	70	41
1937	C-17	34	47
1938	C-18	70	41
1938	C-19	32	47
1938	C-20	34	35

PLYMOUTH

Year	Model	Front	Rear
1933	PC	44	31
1933	PD	44	31
1934	PE	44	41
1934	PF	44	41
1934	PG	44	41
1935	PJ	44	41
1936	P1	44	41
1936	P2	44	41
1937	P3	70	41
1937	P4	70	41
1938	P5	70	41
1938	P6	70	41

DE SOTO

Year	Model	Front	Rear
1933	SD	30	41
1934	SE	32	41
1935	SF	44	41
1935	SG	32	41
1936	S1	44	41
1936	S2	32	41
1937	S3	70	41
1938	S5	70	41

DODGE

Year	Model	Front	Rear
1933	DP	44	31
1933	DO	32	47
1934	DR	44	41
1934	DS	44	41
1935	DU	44	41
1936	D2	44	41
1937	D5	70	41
1938	D8	70	41

C-27 GEAR PULLER

(Illustrated on Page 48)

C-27-1	JAWS, per pair	$ 1.95
C-27-2	Retainer RING	.75
C-27-3	Puller SCREW	1.00
C-27-4	Puller Screw ADAPTER	.45
C-27-5	Threaded CROSSPIECE	1.00

MT-29 BRAKE LINING REFACER

(Illustrated on Page 22)

MT-29-70	Brake Lining GRINDING SLEEVE, per doz.	$ .95
MT-29-76	Brake Lining GRINDING SLEEVE, Small, per dozen	.95
MT-29-71	GRINDING ARBOR Standard	3.00
MT-29-75	GRINDING ARBOR Small	3.00

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN

MT-34 BRAKE DRUM AND SHOE GAUGE

(Illustrated on Page 21)

MT-34	GAUGE ASSEMBLY, less Bushings	$50.00
MT-34-7-6	Truck Three-point Gauge ARBOR, only	6.00
MT-34-7	Truck Three-point Gauge Arbor ASSEMBLY	10.50
MT-34-15	Large DRUM GAUGE	4.50
MT-34-26	Reducer BUSHING, 4" to 2¼"	4.00
MT-34-137	Large Centering CONES, per pair	5.50

MT-34 BUSHING CHART

FOR ½, ¾, 1, 1½, 2 and 3 TON TRUCKS

Year	Capacity	Models	Front Bushing	Rear Bushing
1933	½-T	HC, HCL	44	31
	1-T	H-20, H-21	34	217
	1-T	H-22	34	205
	1½-T	H-30, H-31, H-31X	34	217
	1½-T	H-33, H-34	34	205
	2-T	H-43, H-44, H-44X	34	205
1934	½-T	KC, KCL	44	41
	¾-T	K-20, K-21	34	217
	1-T	K-20X, K-21X	34	217
	1½-T	K-30, K-31	34	217
	1½-T	K-32, K-33, K-34	34	249
	1½-T	K-35, K-36, K-37, K-38	50	247
	2-T	K-50, K-51, K-52	200	203
	2-T	K-45, K-46, K-47, K-48	50	247
	3-T	K-70, K-71, K-72	200	201
1935	¾-T	KH-15, KH-16, KH-17, KH-18	34	249
	1-T	K-19, KH-20, KH-21, KH-22, KH-23	34	249
	1½-T	KH-30, KH-31, KH-32 KH-33, KH-31V, KH-32V, KH-33V, K-32V, K-33V, K-34V	34	249
	2-T	K-45V, K-46V, K-47V, K-48V	50	255
	3-T	K-60V, K-61V, K-62V, K-63V	244	253
1936	½-T	LC. FDI-16	44	41
	¾-T	LE-15, LE-16, LE-17	34	249
	1-T	LE-20, LE-21, LE-22, LF-28	34	249
	1-T	LH-29	50	255
	1½-T	LE-30, LE-31, LE-32, LF-35, LF-36, LF-37, LF-38, LF-39, FD3-29, FD3-36, FD3-62, FD4-29, FD4-36, FD4-62, FDD4-62, FDD4-85	34	249
	1½-T	LG-40, LG-41, LG-42, LG-43	50	255
	2-T	LH-45, LH-46, LH-47, LH-48, FD6-36, FD6-51, FD6-62, FD6-80	50	255
	2-T	K-50V, K-51V, K-52V, K-53V	244	253
	3-T	K-60V, K-61V, K-62V, K-63V	244	253
	4-T	LM-70, LM-71	244	253
1937	½-T	MC, PT-50	70	41
	¾-T	MD-15, MD-16	30	35
	¾-T	ME-15, ME-16, ME-17	34	249
	1-T	MD-20, MD-21	30	35
	1-T	ME-20, ME-21, ME-22, MF-28	34	249
	1-T	MH-29	50	255
	1½-T	ME-30, ME-31, ME-32, MF-35, MF-36, MF-37, MF-38, MF-39	34	249
	1½-T	MG-40, MG-41, MG-42, MG-43	50	255
	2-T	MH-45, MH-46, MH-47, MH-48	50	255
	2-T	ML-50, ML-51, ML-52, ML-53	244	253
	3-T	MK-60, MK-61, MK-62, MK-63	244	253
1938	½-T	RC, PT-57, FG-1-16	70	41
	¾-T	RD-15, RD-16	70	35
	¾-T	RE-15, RE-16, RE-17, RF-28	34	249
	1-T	RD-20, RD-21, FG-2-20, FG-2-36	70	35
	1-T	RE-20, RE-21, RE-22	34	249
	1-T	RH-29	50	255
	1½-T	RE-30, RE-31, RE-32, RF-35, RF-36, RF-37, RF-38, RF-39, FG-3-26, FG-3-33, FG-3-59, FG-4-26, FG-4-33, FG-4-59, FG-4-90, FGD-4-82	34	249
	1½-T	RG-40, RG-41, RG-42, RG-43, RG-44	50	255
	2-T	RH-45, RH-46, RH-47, RH-48, RH-49, RZ-65, RZ-66, RZ-67, RZ-68, FG-6-33, FG-6-48, FG-6-59, FG-6-77, FG-6-20, FGZ-6-33, FGZ-6-59, FGZ-6-77, FGZ-6-20	50	255
	2-T	RL-50, RL-51, RL-52, RL-53	244	253
	2-T	RO-55, RO-56, RO-57, RO-58	248	253
	3-T	RK-60, RK-61, RK-62, RK-63	244	253
	3-T	RP-65, RP-66, RP-67, RP-68	248	253
	4-T	RX-70, RX-71	244	253

MT-44 BRAKE LINING REFACER

(Illustrated on Page 22)

MT-44-72	Grinding SLEEVES, per dozen	$ 1.15
MT-44-73	Grinding ARBOR only	3.50

CM-45 CYLINDER COMPRESSION INDICATOR

(Illustrated on Page 40)

CM-45-1	Extra ⅞" Rubber BUSHING only	$ .35
CM-45-2	Extra 18 MM Rubber BUSHING only	.35
CM-45-3	Extra 14 MM Rubber BUSHING only	.35
CM-45-4	By Pass VALVE	.30
CM-45-5	Extra 10 MM Rubber BUSHING Assembly	.70

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN

CM-49 UTILITY PULLER

CM-49	Puller discontinued, superseded by CM-549	
CM-49-6	Threaded CROSSPIECE	$ 3.50
CM-49-10	Main Puller SCREW	2.00
CM-49-59	CLAMP complete	2.95
CM-49-70	LEG only, each	2.25

CM-57 PULLER

(Illustrated on Page 50)

CM-57-1	CROSSPIECE	$ .75
CM-57-2	Main Puller SCREW, Long	1.00
CM-57-3	Hook BOLTS, each	.35
CM-57-4	3/8"x8" Adapter SCREW, each	1.00
CM-57-10	3/8"x3 3/4" Adapter SCREW, each	.05
CM-57-11	5/16"x3" Adapter SCREW	.05
CM-57-12	Puller SCREW, short	.75

CM-83 VALVE GUIDE TOOL

(Illustrated on Page 40)

CM-83-1	Puller SCREW 13"	$ .75
CM-83-2	Puller SCREW NUT	.25
CM-83-3	DRIFT	.50
CM-83-5	Main Puller SCREW	2.00
CM-83-7	Thrust BEARING	.50
CM-83-8	Puller HOUSING	1.00
CM-83-9	Puller SCREW 11"	.75
CM-83-10	Special Valve Guide TAP	1.60
CM-83-11	Puller SCREW (used after tapping guide)	.75
CM-83-12-A	Valve Guide INSTALLING PARTS	2.95
CM-83-12	Installing SCREW	.95
CM-83-13	Installing NUT	.50
CM-83-14	Installing Thrust BEARING	.50
CM-83-15	Installing Spacer SLEEVE	.70
CM-83-16	Installing Thrust BLOCK	.95

MT-102 SEAL PULLER

(Illustrated on Page 56)

MT-102-1	HOUSING	$ .25
MT-102-2	Puller SCREW	.75
MT-102-4	Centering BUSHING	.10

MT-105 FILLER CUP

(Illustrated on Page 56)

MT-105-6	Threaded ADAPTER Only	$ .50
MT-105-7	Shutoff VALVE	.45

C-143 STEERING ARM PULLER

(Illustrated on Page 58)

C-143-1	Puller BODY	$ 1.65
C-143-2	Puller SCREW	1.05

CM-150 TIMING INDICATOR

(Illustrated on Page 38)

CM-150-60	Bakelite CASE only	$ 4.50
CM-150-61	Bezel RING for case	.60
CM-150-62	BACK for case	.60
CM-150-63	Adjustable Spark Gap KNOB	1.25
CM-150	Spark Plug Hole ADAPTERS, each	1.25
CM-150	Adapter RODS, each	1.00
CM-150-M	Timing Data MANUAL	3.50
CM-150-500	GAUGE HEAD only	11.00

C-158 AXLE AND BEARING CUP PULLER

(Illustrated on Page 10)

C-158-1	WING NUT	$ 1.50
C-158-2	Puller STAND only	2.00
C-158-3	Puller SCREW 7/8"-14	1.50
C-158-23	Puller SCREW 1"-14	1.50
C-158-27	Puller SCREW 3/4"-16	1.50
C-158-30	SLEEVE	.65
C-158-31	Sleeve Lock PIN	.10
C-158-32	Thrust BEARING	.60
C-158-35	Small Puller BLOCKS, per pair	1.75
C-158-36	Large Puller BLOCKS, per pair	1.75
C-158-39	Medium Puller BLOCKS, per pair	1.75
C-158-46	Tapered Puller SCREW (For Nos. 35, 36, 39 Blocks)	1.50
C-158-50	Pusher PLATE	1.00
C-158-51	Pusher RING, Large	.50
C-158-52	Pusher RING, Small	.50

C-204 ENGINE LIFTING FIXTURE

(Illustrated on Page 51)

C-204-1	CROSS-ARM	$ 3.75
C-204-2	YOKE, each	2.00
C-204-3	Cross-Arm "U" BOLT ASSEMBLY, each	1.25
C-204-5	7/16"-20 Stud ADAPTERS, each	.65
C-204-11	1/2"-20 Stud ADAPTERS, each	.65
C-204-12	7/16"-20 Cap Screw ADAPTERS, each	.65

C-232 STEERING WHEEL PULLER

(Illustrated on Page 59)

C-232-1	Straight LEG	$ 1.50
C-232-2	Bowed LEG	1.50
C-232-4	Leather Protector CUP	.50
C-232-6	Top CROSS-PIECE	1.75
C-232-7	Puller SCREW	1.10
C-232-14	RIVET	.05
C-232-3	9/16" Adapter BUTTON	.30
C-232-8	11/32" Adapter BUTTON	.30
C-232-12	11/16"Adapter BUTTON	.30
C-232-13	17/32" Adapter BUTTON	.30
C-232-20	Set of 4 Adapter BUTTONS	.75

C-237 SHACKLE BUSHING PULLER

(Illustrated on Page 55)

C-237-1	Main Puller SCREW	$ 1.50
C-237-2	PULLER NUT	.75
C-237-3	BACKING-UP NUT	.90
C-237-4	CUP	.95
C-237-13	Thrust BEARING	.60
	ADAPTERS, each (specify size)	.50

C-244 STUD REMOVER

(Illustrated on Page 51)

C-244-2	KNURLS, each	$ .45

C-265 VALVE TAPPET REAMER SET

(Illustrated on Page 43)

C-265-1	PILOT	$ 1.75
C-265-2	REAMER (oversize .003)	2.50
C-265-3	REAMER (oversize .008)	2.50
C-265-6	REAMER (oversize .030)	2.50
C-265-7	REAMER (oversize .060)	2.50
C-265-4	HANDLE	.05
C-265-5	Pilot Holding PIN	.05

C-293 BEARING PULLER

(Illustrated on Page 11)

C-293-P	Press ASSEMBLY only	$ 8.00
C-293-1	BASE	3.50
C-293-2	Puller SCREW	1.00
C-293-3	Differential Adapter PLUG, Small	.75
C-293-4	5/8" Hex. NUT, each	.05
C-293-5	5/8" STUD	.75
C-293-6	Top CROSSPIECE	2.50
C-293	Bearing Puller PLATES, each	2.50

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT MICHIGAN

C-293 BEARING PLATE CHART

Car	Year	Model	Bearing Removing Plates: Axle Shaft	Pinion Shaft	Differential Carrier
Ply.	1929	Q	10	13	
DeSoto	1929	K	10	13	
Chry.	1929	65-P	12	14	
Chry.	1929	75-R	12	14	20
Chry.	1929	80-L, IMP.			20
Dodge	1929	D.A.	12		
Ply.	1929	U	10	13	
Chry.	1929	66CC	10	13	
Chry.	1930	70-V	11	14	20
Chry.	1930	77-W	11	14	20
DeSoto	1930	C.F.	10	13	
Dodge	1930	D.C., D.D.	10	13	
Chry.	1930	CJ	10	13	
Chry.	1930	CD	10	13	
DeSoto	1930	CK	10	13	
Chry.	1931	CG	11	14	20
Dodge	1931	DG & DH	10	13	
Chry.	1931	CM	10	13	
DeSoto	1931	SA	10	13	
DeSoto	1931	CF	10	13	
Ply.	1931	PA	10	13	
Dodge	1932	DK	12	14	
Dodge	1932	DL	10	13	
Chry.	1932	CH & CL	11	14	20
Chry.	1932	CP	12	14	
Chry.	1932	CI	10	13	
DeSoto	1932	SC	10	13	
Ply.	1932	PB	10	13	
Ply.	1933	PC	10	16	19
Dodge	1933	DP	10	16	19
DeSoto	1933	SD	10	16	19
Dodge	1933	DO	12	14	
Chry.	1933	CO	10	16	19
Chry.	1933	CT	12	14	
Chry.	1933	CQ	12	14	
Chry.	1933	CL	11	14	20
Ply.	1933	PD	10	16	19
Ply.	1934	PF	10	16	19
Ply.	1934	PE	10	16	19
Dodge	1934	DR	10	16	19
Dodge	1934	DS	10	16	19
DeSoto	1934	SE	10	16	19
Chry.	1934	CU	17	12	20
Chry.	1934	CV	17	12	20
Chry.	1934	CA	10	16	19
Chry.	1934	CB	10	16	19
Ply.	1934	PG	10	16	19
Ply.	1935	PJ	10	16	19
Dodge	1935	DU & KCL	10	16	19
DeSoto	1935	SF	10	16	19
Chry.	1935	C-6	10	16	19
Chry.	1935	CZ	10	17	19
DeSoto	1935	SG	10	17	19
Chry.	1935	C-I	12	17	20
Chry.	1935	C-2	12	17	20
Chry.	1935	C-3	12	17	20
Ply.	1936	PI & P2	13	16	19
Dodge	1936	D2 & LC	13	16	19
DeSoto	1936	S-I	13	16	19
DeSoto	1936	S-2	13	17	19
Chry.	1936	C-7	13	17	19
Chry.	1936	C-8	13	17	19
Chry.	1936	C-9	12	17	20
Chry.	1936	C-10, C-11	12	17	20
Ply.	1937	P-3 & P-4	13	21	18
Dodge	1937	D-5 & MC	13	21	18
Dodge	1937	MD		17	20
Dodge	1937	ME		17	
DeSoto	1937	S-3	13	21	18
Chry.	1937	C-14	13	17	18
Chry.	1937	C-16	13	21	18
Chry.	1937	C-17	12	17	20
Chry.	1937	C-15			
Ply.	1938	P5, P6	13	21	18
Dodge	1938	D8, D9	13	21	18
DeSoto	1938	S-5	13	21	18
Chry.	1938	C-18	13	21	18
Chry.	1938	C-19	23	17	18
Chry.	1938	C-20	22	24	25

C-315 BRAKE CYLINDER HONE

(Illustrated on Page 24)

C-315-1A	STONES, 1" to 1⅜"	$ 3.50
C-315-2B	STONES, 1⅜" to 1⅝"	3.50
C-315-3C	STONES, 1½" to 1¾"	3.50
C-315-6A	FELTS, 1" to 1⅜"	2.50
C-315-7B	FELTS, 1⅜" to 1⅝"	2.50
C-315-8C	FELTS, 1½" to 1¾"	2.50
C-315-11	Stone Retainer SPRINGS, each	.05
C-315-12	Driving SHANK	1.00

C-319 REAR WHEEL HUB PULLER

(Illustrated on Page 17)

C-319-1	Puller BODY for 1⅛" Screw	$ 2.85
C-319-2	1" Puller SCREW for earlier type	.50
C-319-12	1⅛" Puller SCREW for later type	1.50

PULLER BODIES FOR EARLIER TYPE NOT AVAILABLE

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN

C-328 KING PIN BUSHING TOOL

(Illustrated on Page 3)

C-328-2	Main SCREW and NUT only	$ 1.00
C-328-4	Puller NUT	.75
C-328-5	ADAPTER 3/4"	.45
C-328-7	ADAPTER 7/8"	.55
C-328-8	ADAPTER 15/16"	.60
C-328-9	ADAPTER 1"	.75
C-328-10	ADAPTER 51/64" for bearing	.75
C-328-6	Thrust WASHER	.05

C-342 KING PIN BUSHING TOOL

(Illustrated on Page 3)

C-342-1	Main SCREW only	$ 1.00
C-342-2	23/32" ADAPTER	.45
C-342-7	25/32" ADAPTER	.45
C-342-8	15/16" ADAPTER	.45
C-342-9	7/8" ADAPTER	.45
C-342-10	1" ADAPTER	.45
C-342-3	HANDLE	.15
C-342-4	5/8" NUT	.05
C-342-6	Thrust WASHER	.05

C-348 SHACKLE BUSHING PULLER

(Illustrated on Page 55)

C-348-1	Main Puller SCREW	$ 1.50
C-348-3	Backing-Up NUT	.90
C-348-4	CUP	1.00
C-348-5	Adapter BUTTON	.50
C-348-6	1/2"NUT, Small	.05
C-348-7	Thrust BEARING	.50
C-348-50	1/2" Puller NUT, Large	.75

C-355 PULLER EQUIPMENT

(Illustrated on Page 50)

C-355-1	Impulse Neutralizer WRENCH	$ 1.00
C-355-2	Crankshaft Nut WRENCH, Long Type	1.50
C-355-3A	Main Puller SCREW, CROSSPIECE, and all CAP SCREWS	2.50
C-355-4	Crankshaft Gear Puller PLATE	1.50
C-355-5	Crankshaft Gear Installing NUT	1.25
C-355-6	Crankshaft Gear Installing CUP	1.40
C-355-7	Neutralizer Installing PLATE	1.25
C-355-8	Spanner WRENCH	.75
C-355-9	3/8" Adapter SCREW, each	.05
C-355-10	3/4" Hex. NUT	.05
C-355-11	5/16"x2" Adapter SCREW, each	.05
C-355-12	3/8" WASHER, each	.05
C-355-14	5/16"x3 1/2" Adapter SCREW, each	.05
C-355-15	HANDLE	.15
C-355-16	Crankshaft Nut WRENCH, Short Type	1.50

C-358 OIL SEAL PULLER

(Illustrated on Page 12)

C-358-2	Thrust WASHER	$ .10
C-358-3	Main Puller SCREW	1.00
C-358-4	Oil Seal Puller LEG, each	.25
C-358-5A	Puller HEAD and COLLAR ASSEMBLY, less Legs	1.25
C-358-5B	Puller HEAD, COLLAR AND LEG ASSEMBLY	2.25
C-358-7	Puller Leg Expanding CONE	.40
C-358-8	Thrust NUT	.05
C-358-9	HANDLE	.10
C-358-10A	Puller STAND with 3 Legs	2.00
C-358-10	Puller STAND only	1.60
C-358-11	Stand LEGS WITH NUT, each	.40
C-358-12	Puller Leg NUT, each	.05
C-358-13	Spacer BUSHING	.50

C-360 CLUTCH PLATE ARBOR

(Illustrated on Page 26)

C-360-1	Inner Expanding TUBE	$ 1.35
C-360-2	Main SCREW	.75
C-360-3	Centering CONE	.75
C-360-5	Split BUSHING	.50
C-360-6	Small EXPANDER NUT	.50
C-360-7	Large EXPANDER NUT	.50
C-360-10	WING NUT	.05
C-360-11	Thumb SCREW	.05
C-360-13	Sliding Locking COLLAR	.50
C-360-14	Spacer SLEEVE	.50

C-362 BRAKE CYLINDER REFILLER

(Illustrated on Page 19)

C-362-9	Small ADAPTER, each	$ .25
C-362-11	Large ADAPTER, each	.25
C-362-12	Glass JAR with Gasket	.30
C-362-13	Sponge Rubber GASKET	.12

As the parts for the Refiller Head cannot be supplied separately, it is necessary that it be returned to the factory for repair.

C-372 VALVE SEAT GRINDING EQUIPMENT

(Illustrated on Page 42)

C-372-2	Electric Drive MOTOR (Universal Current)	$25.00
C-372-3	Diamond Equipped Stone DRESSER	12.50
C-372-3-8	DIAMOND and HOLDER ASSEMBLY, only	3.75
C-372-5	STONE HOLDER, BUSHING, WASHERS AND KEYS, Less Stones, each	4.40
C-372-5-2	Hard Steel BUSHING only for stone holder, each	1.75
C-372-6	Finishing STONE — for steel	.60
C-372-7	Roughing STONE — for steel	.60
C-372-10	Valve Guide REAMER — size .343"	1.95
C-372-11	Valve Guide REAMER — size .375"	2.00

MILLER TOOL & MFG. CO. AUTO SERVICE TOOLS DETROIT, MICHIGAN

C-372-12	Valve Guide COUNTERSINK (Used with Reamers)	2.30
C-372-13	Valve Guide Expansion PILOT — size 11/32"	3.00
C-372-14	Valve Guide Expansion PILOT — size 3/8"	3.00
C-372-15	Flexible COUPLING for Electric Drive	1.50
C-372-16	Finishing STONE for Cast Iron	.60

C-373 WATER PUMP BUSHING TOOL

(Illustrated on Page 31)

C-373-2	Bushing Removing ADAPTER	$ .50
C-373-4	Bushing Removing CUP	.95
C-373-6	Thrust BEARING	.50

Other parts cannot be supplied separately. Tool must be returned to Factory to match old and new parts to precision limits.

C-374 SPARK ADVANCE CHECKING LIGHT

(Illustrated on Page 34)

C-374-5	Lighting UNIT only	$ 3.50

C-384 WATER PUMP BUSHING BURNISHER

(Illustrated on Page 32)

C-384-1	BURNISHER only	$ 5.00
C-384-2	CUTTER with Set Screw and Wrench	1.75
C-384-4	1/4" Set Screw WRENCH	.10
C-384-5	Pilot BUSHING for large pumps	1.00
C-384-6	HANDLE	.10

C-387 OVERSIZE VALVE INSERT INSTALLING EQUIPMENT

(Illustrated on Page 42)

C-387-1	.010" Oversize CUTTER, size 1.5215	$ 3.75
C-387-2	.010" Oversize CUTTER, size 1.5835	3.75
C-387-3	.010" Oversize PEENING TOOL, size 1.5215	3.25
C-387-4	.010" oversize PEENING TOOL, size 1.5835	3.25
C-387-5	Insert PULLER	4.00
C-387-6	Peening DRIFT	1.50
C-387-7	1/4" Set Screw WRENCH	.10
C-387-8	Cutter Drive ARBOR AND HANDLE	3.90
C-387-9	Cutter Drive Arbor HANDLE only	.10
C-387-10	1/4" Allen Set SCREW	.05

DD-398 "WEE GEE' BOARD

(Illustrated on Page 8)

Detailed parts list available on request.

C-402 PRECISION KIT

(Illustrated on Page 33)

C-402-1	Leather POUCH	$ .50
C-402-2	.310" and .238" WRENCH	.35
C-402-3	.250" and .238" WRENCH	.35
C-402-4	Feeler GAUGE	.60
C-402-5	Screw DRIVER	.15
C-402-6	Spark Plug Gap GAUGE	.25

C-408 SPRING COVER LUBRICATING TOOL

(Illustrated on Page 55)

C-408-5	Extra PLUGS, per hundred	$ 1.80
C-408-104	CLAMP only	.65
C-408-201	PLUNGER UNIT including Canvas Injector Screw	1.25
C-408-202	Canvas INJECTOR SCREW	.15

C-410 STEERING ARM PULLER

(Illustrated on Page 58)

C-410-1	Top CROSSPIECE	$2.00
C-410-2	Base Strap ASSEMBLY	1.60
C-410-3	Puller SCREW	1.15
C-410-5	Puller LEG, each	1.90
C-410-7	Leg RIVET, each	.05
C-410-8	Base Strap SCREW	.05
C-410-9	Base Strap RIVET	.05

C-411 CLUTCH FIXTURE

(Illustrated on Page 25)

C-411-1	BASE only	$ 6.75
C-411-2	Top SPIDER only	4.75
C-411-3	Main SCREW	1.75
C-411-4	Spacer LEG only, each	.25
C-411-5	Wing NUT	1.50
C-411-8	Spacer Leg NUT, each	.05
C-411-9	Main Screw Thrust WASHER	.05
C-411-10	Main Screw Hold-Down NUT	.05
C-411-12	Spacer Leg Flat WASHER, each	.05
C-411-13	Main Screw Hold-Down WASHER	.05
C-411-14	Extension Gauge LOCK NUT	.75
C-411-15	Extension GAUGE	.75
C-411-20	"A" and "B" GAUGE on Chain	.75
C-411-34A	1938 ADAPTERS — set of 3 on chain	1.50

C-411-M CLUTCH FIXTURE MODERNIZING KIT

Complete with necessary details for Modernizing a C-364 Fixture ..... $ 7.75

C-412 WATER PUMP FAN HUB PULLER

(Illustrated on Page 30)

C-412-1	Puller BODY	$ 1.35
C-412-2	Puller SCREW	.35

C-424 BLEEDER TANK

(Illustrated on Page 19)

C-424-3	SAFETY VALVE	$ 1.25
C-424-8	Air INTAKE VALVE	.75
C-424-9	100 lb. PRESSURE GAUGE	1.50
C-424-10	1/2" Pipe ADAPTER	.50
C-424-11	1/4" Pipe ADAPTER	.50
C-424-12	1/8" Pipe ADAPTER	.25
C-424-14	Hose Shut-off VALVE	.45
C-424-15	Short Flexible HOSE WITH SWIVEL	2.00
C-424-17	1 1/2" - 18 ADAPTER	1.25
C-424-18	HOSE complete less Adapters	4.00
C-424-19	1 1/4" - 18 ADAPTER	1.25
C-424-24	Special Rolled Thread ADAPTER	1.25
C-424-25	3/4" - 18 ADAPTER	1.00
C-424-27	Filler PLUG AND GASKET	1.00
C-424-29	Tank to Hose Shut-off VALVE	.45
C-424-50	SET of ADAPTERS 10, 11, 12, 17 and 19	2.75

Same parts also used on C-428 Tank.

C-425 VACUUM METER

(Illustrated on Page 52)

C-425-1	Vacuum METER only	$ 3.40
C-425-2	2-ft. Rubber TUBING	.25

DD-425 GASOMETER

(Illustrated on Page 53)

DD-425-7	Universal FITTINGS	$ 1.00
DD-425-12	Graduated BURETTE and CONNECTIONS	4.00
DD-425-13	VACUUM CUPS, each	.05
DD-425-14	Metal PUMP only	1.75
DD-425-15	Complete Set Rubber HOSE (3 pieces)	1.50
DD-425-M	Metal PUMP and set of Rubber HOSE (no fittings) MODERNIZING KIT	2.15
DD-425-R	Recondition Used Gasometer	3.95

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DD-428 CAMBER AND CASTER GAUGE

(Illustrated on Page 8)

Detailed parts list available on request

C-430 DIAL INDICATOR ADAPTERS

(Illustrated on Page 28)

C-430-3	¼" Eyelet ROD	$ .50
C-430-5	⅜"x8" ROD	.50
C-430-8A	SWIVEL JOINT and 2 Rods	2.50
C-430-12	DIAL INDICATOR only	9.00
C-430-15	Knurled NUT	.35
C-430-16	Indicator Mounting SCREW	.15
C-430-17	CLAMP only	1.75
C-430-18	Clamp Extension ROD	.15
C-430-19	Lock NUT, each	.05

DD-431 REAR SPRING SHACKLE BOLT PULLER

(Illustrated on Page 54)

DD-431-1	Puller BODY	$ .90
DD-431-2	Puller SCREW	1.15
DD-431-3	Thrust NUT	.05

C-435 TIMING GAUGE

(Illustrated on Page 37)

C-435-A	ASSEMBLY less Dial Indicator	$ 6.00
C-435-1	Dial Gauge BRACKET	2.25
C-435-2	Cylinder Head ADAPTER	2.00
C-435-3	Piston Contact ROD	1.00
C-435-5	DIAL INDICATOR only	9.00
C-435-6	Indicator Mounting SCREW	.05
C-435-7	WING NUT	.05
C-435-10	DISTRIBUTOR LIGHT	.50
C-435-11	Dial Gauge Bracket SPRING	.05

DD-436 WHEEL BALANCING FIXTURE

(Illustrated on Page 5)

DD-436-1	BODY	$ 3.25
DD-436-2	SPACER	.75
DD-436-3A	Indicating RODS and SWIVEL	3.25
DD-436-3	Indicating Mounting ROD	.75
DD-436-4	Indicating ROD (Pointer)	.55
DD-436-5	Indicating SWIVEL	1.50
DD-436-10	ARBOR only	6.50
DD-436-11	CONES, each	2.50
DD-436-17	BEARINGS, each	2.25

C-439 HEADLIGHT LENS TOOL

(Illustrated on Page 35)

C-439-1	BODY	$ .35
C-439-2	HANDLE, NUT AND WASHER	.10
C-439-5	CUP, WASHER AND NUT	.05

C-452 UNIVERSAL JOINT FLANGE PULLER

(Illustrated on Page 14)

C-452-1	Puller PLATE	$ 1.40
C-452-2	Puller SCREW	1.80
C-452-3	Adapter PLUG, each	.60

C-453 GENERATOR PULLEY PULLER

(Illustrated on Page 34)

C-453-1A	Hinged Puller BODY ASSEMBLY	$ 3.75
C-453-4	Puller SCREW and BUTTON	1.75
C-453-6	Retainer RING	.75
C-453-7	HANDLE	.15

C-470 HOT-OIL FLUSHER

(Illustrated on Page 18)

Detailed parts list available on request.

C-476 REAR WHEEL HUB PULLER

(Illustrated on Page 17)

C-476-1	Puller BODY	$ 3.00
C-476-2	Puller SCREW only	1.50

C-483 FUEL PUMP CHECKING GAUGE

(Illustrated on Page 52)

C-483-1	GAUGE only	$ 3.00
C-483-2	Connector NUT	.10
C-483-3	Hose CONNECTOR	.20
C-483-4A	T CONNECTOR ASSEMBLY	1.00
C-483-7	2 ft. Rubber TUBING	.25

C-492 SHOCK ABSORBER TOOLS

(Illustrated on Page 57)

C-492-1	Staking TOOL	$ 1.10
C-492-2	Threading DIE	1.00

C-496 UNIVERSAL JOINT FLANGE TOOL

(Illustrated on Page 14)

C-496-1	Main SCREW	$ 1.75
C-496-3	Thrust BEARING	.60
C-496-4	Thrust NUT	.05
C-496-6	Thrust CUP	1.00

C-497 OIL SEAL PULLER

(Illustrated on Page 61)

C-497-1	Puller HOUSING	$ 1.25
C-497-2	Thrust WASHER	.05
C-497-3	Puller SCREW	1.00
C-497-4	Puller LEGS, each	.25
C-497-5A	Puller HEAD, and COLLAR ASSEMBLY, less Legs	1.25
C-497-5B	Puller HEAD, COLLAR and LEG ASSEMBLY	2.50
C-497-8	Thrust NUT	.05
C-497-9	HANDLE	.05

C-498 WATER PUMP IMPELLER PULLER

(Illustrated on Page 30)

C-498-1	Puller BODY	$ 1.85
C-498-2	Puller SCREW	.35

C-549 UTILITY PULLER

(Supersedes CM-49)

CM-549-6	Threaded CROSSPIECE	$ 3.50
CM-549-4	Puller PIN for Leg, each	.10
CM-549-7	Puller Screw HANDLE Bar	.15
CM-549-10	Main Puller SCREW	2.00
CM-549-59-A	CLAMP Complete	2.95
CM-549-70	LEG Only, each	2.25

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